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ABSTRACT

These transcripts present testimony concerning the reauthorization of the Elementary and Secondary Education Act (ESEA), which since 1965 has provided the bulk of federal aid to elementary and secondary schools and related programs. Much of the testimony was from Arizona education officials, school administrators, teachers, civic leaders, and business people who voiced opinions about the efficacy of specific programs and activities funded by the ESEA, particularly those items that they would like to see expanded or improved. Testimony was heard from: (1) United States Representatives from Arizona, Karan English and Jolene Unsoeld; (2) an elementary school principal; (3) a high school counselor; (4) the Arizona state administrator of vocational and technical education; (5) school district officials; (6) staff of the Scottsdale and Mesa chambers of commerce; (7) local education foundations; and (8) educators from the Dial and Motorola corporations. Correspondence and statistical materials from the Arizona Center for Vocational/Technological Education at Northern Arizona University are included. (MDM)

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FIELD HEARING ON H.R. 6: REAUTHORIZATION OF THE ELEMENTARY AND SECONDARY EDU- CATION ACT OF 1965

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HEARING

BEFORE THE

SUBCOMMITTEE ON ELEMENTARY, SECONDARY,
AND VOCATIONAL EDUCATION

OF THE

COMMITTEE ON EDUCATION AND LABOR
HOUSE OF REPRESENTATIVES

ONE HUNDRED THIRD CONGRESS

FIRST SESSION

HEARING HELD IN TEMPE, AZ, OCTOBER 16, 1993

Serial No. 103-83

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CONTENTS

	Page
Hearing held in Tempe, AZ, October 16, 1993	1
Statement of:	
Guzman, Peter, Principal, Winkelman Elementary School; Jon Engelhardt, Executive Director, Center for Excellence in Education, Northern Arizona University; Vangie Stewart, Special Education Director, Kayenta School District; Brent Hulls, Member, Vocational Education Advisory Committee, Flagstaff School District; and Diana Thorson, Member, Vocational Education Advisory Committee, Flagstaff School District	102
Losh, Charles, State Administrator, Vocational Technical Administration, Arizona Department of Education; Terry Oester, Chairman of the Board and President of Partnership Foundation; and Dr. Kristina Allen, Environmental Education Specialist, Arizona Department of Education	5
Reck, Donald, Director of Public Affairs, Scottsdale Chamber of Commerce; Diane Jezek Powell, President, Scottsdale Unified School District Governing Board; Frank Edwards, Director of Executive Development and Education, Dial Corporation; and Barbara Buckles, Counselor, Career Center, Saguaro High School	66
Thomas, Colleen, Member, Board of Directors, Mesa Chamber of Commerce; Debra Tolman, Executive Director, Mesa Foundation for Educational Excellence; Stephanie Connor, Community Education Specialist, Motorola Semiconductor Products Sector; and Virginia Guy, Director, Mesa Public School Career Ladder	27
Prepared statements, letters, supplemental materials, et cetera:	
Allen, Dr. Kristina, Environmental Education Specialist, Arizona Department of Education, prepared statement of	14
Connor, Stephanie, Community Education Specialist, Motorola Semiconductor Products Sector, prepared statement of	54
Cooper, Susan R., Instructional Program Coordinator, Northern Arizona University, Arizona Center for Vocational/Technological Education, prepared statement of	126
Donovan, Gregory J., Curriculum Specialist, Arizona Center for Vocational/Technological Education, prepared statement of	124
English, Hon. Karan, a Representative in Congress from the State of Arizona, prepared statement of	3
Layton, Owen W., Past Chairman, State Council on Vocational Education, prepared statement of	123
Oester, Terry, Chairman of the Board and President of Partnership Foundation, prepared statement of	8
Powell, Diane Jezek, President, Scottsdale Unified School District Governing Board, prepared statement of	88
Reck, Donald, Director of Public Affairs, Scottsdale Chamber of Commerce, prepared statement of	69
Thomas, Colleen, Member, Board of Directors, Mesa Chamber of Commerce, prepared statement of	30
Thorson, Diana, Member, Vocational Education Advisory Committee, Flagstaff School District, prepared statement of	14
Tolman, Debra, Executive Director, Mesa Foundation for Educational Excellence, prepared statement of	36

FIELD HEARING ON H.R. 6: REAUTHORIZATION OF THE ELEMENTARY AND SECONDARY EDUCATION ACT OF 1965

SATURDAY, OCTOBER 16, 1993

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON ELEMENTARY, SECONDARY,
AND VOCATIONAL EDUCATION,
COMMITTEE ON EDUCATION AND LABOR,
Tempe, AZ.

The subcommittee met, pursuant to notice, at 1 p.m., at Mesa Public Schools Administration Center, Tempe, Arizona, Hon. Karan English presiding.

Members present: Representatives English and Unsoeld.

Ms. ENGLISH. The Subcommittee on Elementary, Secondary, and Vocational Education will come to order. Good afternoon to all of you, and thank you very much for being here.

I'm pleased to welcome you all to this official subcommittee hearing on the reauthorization of the Elementary and Secondary Education Act. Today's topic will be "Facilitating Partnerships in Education." Our meeting will focus on cooperative efforts between school districts and businesses, universities and other governmental agencies.

Today's hearing is one of several that our subcommittee has held this congressional session on elementary and secondary education. The information we will gather today from listening to the testimony of our witnesses will be used to help in our task of restructuring Federal education programs.

This year has the potential to be a year of reform and revitalization of America's schools. The House of Representatives recently passed the Goals 2000 legislation. This legislation establishes a framework for reform which will drive the reauthorization for the Federal elementary and secondary programs, including the \$7 billion Chapter 1 program.

This reform will focus on setting high standards for all children, targeting our resources at the most at-risk students, and facilitating local reform efforts by allowing more flexibility and local control.

In an attempt to create a lifelong learning approach to education, we must combine these school reform efforts with the restructuring of the higher education system and job training programs. The dedication and hard work of the education community can and will revitalize our Nation's public schools and the American workforce from early childhood intervention, with programs like Head Start,

(1)

to the development of a comprehensive school-to-work transition process and job training programs.

The private sector and higher education institutions, and parents, will be vital partners in this effort to restructure the way education works in this country. Through my personal experience with the education community and the State legislature, I have been impressed by the commitment of Arizona's business community to education issues.

Our State is at the forefront of education reform, due in a large part to the cooperative efforts involving partnerships we will hear about today. I commend those in this room and all of the Arizona education community for taking it upon themselves to move forward with their innovative initiatives.

It is vitally important to expand those partnerships we will hear about over broader areas within Arizona, and share our expertise and history with other regions of this country.

In an era of increasing demands, and decreasing resources, I believe education is the foundation to reinstate the values this country was built on, and stabilize the future for our children. Through the efforts of people like those before us today, I have great hope that we will begin to attack the symptoms of a "lack of commitment" and "integrated approach to growth." The seeds of poverty, unemployment and crime are nourished when we ignore education. With a society growing as fast as ours, we must not delay in creative, cooperative commitment to education and reform. We must meet the challenge of providing the highest quality of education to our children.

As a freshman Member of Congress and a member of this subcommittee, I hope that I will be able to assure that the needs of Arizona's educational community are served as we move forward with an agenda of reform and restructuring.

I look forward to sharing a dialogue with you today about the special needs we face in Arizona. I am anxious to learn more about the cooperative relationships that you have developed at the State and local levels. Your comments on how the Federal Government can help you with your efforts to meet the responsibility of educating our children are very important.

I'd now like to introduce my subcommittee colleague who's here with me today at this hearing. Congresswoman Jolene Unsoeld is from Olympia, Washington. She serves as the representative of Washington's 3rd Congressional District.

Mrs. Unsoeld has a background in State government, having served as a member of the Washington State Legislature.

She's also well known and respected for her commitment to preserving our natural resources and addressing women's issues in addition to her interest in education. She has been an outspoken advocate for school reform. She recently held a hearing in Vancouver, Washington that I attended on educational partnerships with the private sector, which focused on vocational education and mentoring.

I thank her for taking time out of a very busy schedule to be with us today. And we'll turn it over to Mrs. Unsoeld for an opening statement.

[The prepared statement of Ms. English follows:]

STATEMENT OF HON. KARAN ENGLISH, A REPRESENTATIVE IN CONGRESS FROM THE
STATE OF ARIZONA

Good afternoon everyone and thank you for coming.

I am pleased to welcome you all to this official subcommittee hearing on the reauthorization of the Elementary and Secondary Education Act. Today's topic will be "Facilitating Partnerships in Education." Our meeting will focus on cooperative efforts between school districts and businesses, universities and other governmental agencies.

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This reform will focus on setting high standards for all children, targeting our resources to the most at-risk students, and facilitating local reform efforts by allowing more flexibility and local control.

In an attempt to create a lifelong learning approach to education, we must combine these school reform efforts with the restructuring of the higher education system and job training programs. The dedication and hard work of the education community can and will revitalize our Nation's public schools and the American workforce from early childhood intervention, with programs like Head Start, to the development of a comprehensive school-to-work transition process and job training program. I am excited to be a part of that reform process.

The private sector and higher education institutions will be vital partners in this effort to restructure the way education works in this country. Through my personal experience with the education community and the State legislature, I have been impressed by the commitment of Arizona's business community to education issues.

Our State is at the forefront of education reform, due in a large part to the cooperative efforts around partnerships we will hear about today. I commend those in this room and all of the Arizona education community for taking it upon themselves to move forward with their innovative initiatives.

It is vitally important to expand those partnerships we will hear about over broader areas within Arizona and share our expertise and history with other regions of our country.

In an era of increasing demands, and decreasing resources, I believe education is the foundation to reinstate the values this country was built on, and stabilize the future for our children. Through the efforts of people like we will hear from today, I have great hope that we will start to directly attack the symptoms of a "lack of commitment" and "integrated approach to growth." The seeds of poverty, unemployment, and crime are nourished when we ignore education. With a society growing as fast as ours, we must not delay in creative, cooperative commitment to education and reform and meet the challenge of providing the highest quality of education to our children.

As a freshman Member of Congress and this subcommittee, I hope that I will be able to assure that the needs of Arizona's educational community are served as we move forward with this Federal agenda of reform and restructuring.

I look forward to sharing a dialogue with you today about the special needs we face in Arizona and anxious to learn more about the cooperative relationships that you have developed at the State and local levels. Your comments as to how the Federal Government can help you with your efforts to meet the responsibility of educating our children are important.

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She has been an outspoken advocate for school reform. She recently held a hearing in Vancouver, Washington that I attended on educational partnerships with the private sector which focused on vocational education and mentoring.

I thank her for taking time out of her busy schedule to be with us today. With that, I will turn it over to Mrs. Unsoeld for an opening statement.

Mrs. UNSOELD. Thank you very much, Karan. Good afternoon. It really is a pleasure to be here in Arizona—my first time. And I'm doubly appreciative that you gave me Pacific northwest weather so that I would feel at home.

When I got up this morning, at what would be the equivalent of your 2:15 a.m. to come here, I was not going to let the weather on the east coast, and whatever took place in Chicago, prevent me from getting here. So I arrived five minutes before the meeting was to start. But it is a real pleasure to be here.

In addition to the hearing that Karan came to in Vancouver, Washington for me, I have also had the opportunity to participate in a hearing in Rhode Island. And it is fascinating how each community is—we've all got the common needs of education, and yet each community has its own unique creativity and approach to it. And it is just fascinating.

So I'm looking forward to what I'm going to learn today and be able to apply it both in my State, and in our work in the committee. It is particularly important, it seems to me that as our revenue basis is shrinking, at both the Federal level and the State level, that we find new partnerships and figure out how to do more with less. We don't always succeed, but it is something that we have to learn to do better.

We have partnerships between business and education, teachers and business that I think are very, very important and to which we have not given as much attention in the past as they probably deserve. And in my area there has been, in addition to the hands-on classroom help with early childhood education, the direct involvement of the business community. There are, of course, also the generous donations that have been made in computer software collaboration with the Oregon Museum of Science and Industry.

And again, I repeat that I'm looking forward to what I'm going to learn from you all today. So thank you for having me here.

Ms. ENGLISH. Thank you. And next time you come we'll try to have more Arizona-type of weather. I was pretty surprised myself.

I'd like to have the first panel please come up and take your seats. Members of the first panel are Dr. Charles Losh, or Losh. Am I saying that correctly?

Mr. LOSH. Losh.

Ms. ENGLISH. Losh. Mr. Terry Oester and Dr. Kristina Allen.

As you come forward, I'd like to note that I know that many of you in the audience today have worked with me in the past. We go to a lot of effort to try to get a broad variety of testimony on the panels. I am the first to recognize that it won't incorporate everybody's opinion. Therefore, we also receive written testimony. If you have additional comments, you are invited to please submit a written testimony, and it will be included in the record. Don't hesitate to do that, especially if your opinion isn't voiced at one of the panels this afternoon.

I'd like to ask the witnesses, if your statements are longer than five minutes, to try to summarize. The longer you take in reading your statements, the less time we will have for dialogue. So please

keep your statements as close to five minutes as possible. All of your written testimony will be put into the record.

So with that I welcome the first panel. And let me do some introductions here. Mr. Losh is with the State Administrator, Vocational Technical Education, Arizona Department of Education. He has served in a similar capacity in Utah and North Dakota and has published work on competency-based technical instruction, evaluation and benchmarking. Currently, he is the editor of the American Technical Education Association Journal, and has been in the classroom as a vocational education instructor.

Thank you very much for being here today.

STATEMENTS OF CHARLES LOSH, STATE ADMINISTRATOR, VOCATIONAL TECHNICAL ADMINISTRATION, ARIZONA DEPARTMENT OF EDUCATION; TERRY OESTER, CHAIRMAN OF THE BOARD AND PRESIDENT OF PARTNERSHIP FOUNDATION; AND DR. KRISTINA ALLEN, ENVIRONMENTAL EDUCATION SPECIALIST, ARIZONA DEPARTMENT OF EDUCATION

Mr. LOSH. Thank you Representative English, Representative Unsoeld. I'm very pleased to be here today on behalf of C. Diane Bishop, Superintendent of Public Instruction and to present this testimony regarding business industry partnerships.

In 1987, representatives of Arizona business and industry were brought together to identify actions that would improve our educational system's ability to prepare a competitive world-class workforce. It was their conclusion that the most obvious requirement is better performance of all of their educational endeavors. This means better and more opportunities for our youngest learners, more effective delivery of basic and more advanced academic content to our learners in the higher grades, and finally, a recognition of the needs for specific occupational preparation in our education delivery system.

Additionally, if we are to improve our ability to prepare a competitive workforce that is world-class, then we must agree on the skill requirements of a world-class workforce. Logically, if we are in a global community, then those requirements will be similar from community to community, cultural group to cultural group, and occupation to occupation. This can be concluded given the technological tools for competitive workforce are essentially the same at the State, national and international level.

A recent report by the GAO, transition from school to work, how States are developing new strategies for their educational systems, indicates in results in brief, that their analysis show that even though American high schools direct most of their resources for preparing students for college, few incoming freshman, only about 15 percent, go on to graduate and then obtain a four-year college degree within six years of high school graduation.

A substantial number of the remaining 85 percent wander between different educational and employment experiences, many seemingly ill-prepared for the workplace. This particular activity, unfortunately, has been called the shopping mall high school.

Your particular topic today is how the Federal Government can assist the education system with the developing business and industry partnerships. I'd like to share with you an instance of a

partnership that we have been working on in the State of Arizona for the past 18 months. This particular partnership is called the Work Force Compact. The Work Force Compact was developed with a group of business and industry representatives, representatives of both private and public postsecondary education.

Students participating in the Work Force Compact receive opportunities in several different areas. They receive opportunities to participate in formal bureau of apprenticeship training programs, wherein those particular students, upon completion of their high school program, which includes that activity, will go into an indentured occupational area.

A second area of concentration we're calling a youth apprenticeship, a term I'm sure is very familiar to both of you. Youth apprenticeship, in our particular project, the Work Force Compact, is a non-indentured, paid experience in the workforce.

The third type of workforce experience that we have made available to our young people is called an internship. Once again this is in business and industry but is an unpaid experience.

Our partners in the business and industry sector include several different organizations. Those organizations include Radio Shack; Allied Signal; Motorola Corporation; Best Western Corporation; Phoenix Pipe Fitting Trades Joint Apprenticeship Committee; SUNT Corporation, a major international construction corporation; Allied Signal, which I have already mentioned, and other continuing to grow numbers of particular groups in this particular partnership.

To respond specifically as to how you might—how the legislative activity might improve these particular partnerships activities, I would draw your attention specifically to the Carl E. Perkins Vocational Applied Technology Act of 1990 and Title III, part (D), Business Labor Education Partnerships for Training. This particular piece of legislation, which I'm sure you're familiar with, was enacted by the Congress in 1990.

However, all this—although this was approved, there were never—funds were never allocated for this particular piece of legislation. So that is definitely one piece that we would find very helpful in our activities in the State of Arizona.

That concludes my initial remarks. Thank you, very much.

Ms. ENGLISH. Thank you, Mr. Losh.

Mr. Terry Oester, chairman of the board and President of Partnership Foundation, also is our second panelist. He has an extensive economic development background in both the domestic and international arenas; has founded a nonprofit educational foundation to help bring business and schools together; hopes to eventually expand the program nationwide and around the world. He is a resident of Fountain Hills, and his wife Donna is a teacher at the Fountain Hills School District.

Welcome.

Mr. OESTER. Thank you for your invitation to testify before you on facilitating partnerships in education.

Fountain Hills School's Partnership Foundation, doing business as the Partnership Foundation, was founded to bring together public and private entities to develop educational opportunity for the training and retraining of people for a global marketplace.

The work of the Foundation centers on the implementation of education programs for lifelong learning, in conjunction with the utilization of the advanced technologies in the computer and communications industries.

The Foundation was formed as a result of a request of the Fountain Hills school's governing board president, Cathy Higgins, to examine how business might be involved in the schools. Due to the use of Federal funding and the ever-shrinking State funding, the governing board realized if they were going to provide quality education within the district that partnerships, public and private, would have to be developed.

Partnerships are an invaluable resource for educational institutions. They provide funds for program development, equipment for training, and in some instances land and facilities. In general, partnerships provide the bridge in funding where public resources have diminished.

If there is a disadvantage to partnerships, it is that not all school districts or institutions have the ability to put a partnership together. Although corporate entities provide contributions on a national level, oftentimes the larger contributions are placed where there is a direct link to a manufacturing plant or corporate offices. This practice, although understandable, represents a disparity to those educational institutions who do not have a strong corporate connection. If there is Federal involvement in facilitating partnerships, it should be to lessen the disparity of corporate contributions.

As we approach the information age, access to technology must be available to all people. Public and private partnerships will be created to provide access to many districts and institutions; however, a gap will remain in many areas. The Federal Government should stimulate and encourage those partnerships that look beyond urban and rural issues, or rich or poor districts, and focus on the ability to fund projects that provide the necessary learning skills for all people to be productive.

In the spirit of reinventing government, cooperation between agencies should be established to fund partnership proposals. If one looks at the spectrum involved in education, it becomes apparent that if a person does not develop the necessary skills, it affects labor, it affects commerce. In addition, it affects the way our communities develop, the way we conduct our lives and the way in which we deal with our own relationships.

The development of a simplistic solution to a complex problem does not readily address the need for training and retraining of people. It only provides for negative impacts on existing systems, moneys not directly related to training and retraining, and trendy hypotheses.

From an applicant's viewpoint, since each agency has its own related program, the applicant must address the grant hoops and loops of that particular agency. If there were combined agency funding, the grant hoops and loops would be diminished, more money would be available for funding, and a project could be implemented sooner.

The need to facilitate partnerships in education goes beyond funding. The educational facility has become a community outlet

for violence, harassment, intimidation and drug connections. In essence, the educational facility has assimilated the negative social aspects that we all see when we turn on the evening news.

Federal policy must be established, not mandates which diminish educational revenues through compliance, but comprehensive policy that provides for the social welfare and human welfare for learning. A personal partnership, if you will, that provides for self-respect, tolerance, and the growth and development of the society.

Thank you, very much.

[The prepared statement of Mr. Oester follows:]

STATEMENT OF TERRY K. OESTER, CHAIRMAN OF THE BOARD/PRESIDENT,
PARTNERSHIP FOUNDATION, FOUNTAIN HILLS, ARIZONA

The Fountain Hills School's Partnership Foundation, doing business as the Partnership Foundation, was founded to bring together public and private entities to develop educational opportunities for the training and retraining of people for a global marketplace. The work of the Foundation centers on the implementation of education programs for lifelong learning in conjunction with the utilization of the advanced technologies in the computer and communications industries.

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vides for self-respect, tolerance of others, and the growth and development of a society.

Ms. ENGLISH. Thank you.

Dr. Kristina Allen, our third panelist, an environmental education specialist, Arizona Department of Education. She is currently coordinating the implementation of Arizona's Environmental Education Program. She also heads up the marketing effort for the environmental license plates. She has a background in math and science education, and served as an elementary school teacher.

Doctor.

Dr. ALLEN. Madam chair and members of the subcommittee, I'd like to thank you for asking me to speak today on partnerships and environmental education using Arizona as an example. Partnership models that have been successfully implemented in Arizona will work elsewhere in the United States to support quality education and improve our environment.

Environmental Education in Arizona has a rich history of partnerships between various entities. In 1990, the Arizona Environmental Education Act was developed through the support of partnerships between education, businesses, organizations, and agencies. Congresswoman English's guidance and efforts played a key role in these undertakings. Arizona is in the forefront nationally, in regards to Environmental Education.

I recently returned from the North American Association for Environmental Education, NAAEE, conference where I was very proud to be representing Arizona. Many States are looking to Arizona for guidance in environmental education, and are greatly impressed with our well-articulated and comprehensive environmental education bill.

Congresswoman English, at that time Representative English, was a key player in the drafting of the Environmental Education legislation. Representative English had the foresight to assemble a diverse group of individuals representing State agencies, businesses, nonprofit organizations, and educators, kindergarten through post-college, to create legislation that would reflect the partnerships that are necessary to build a foundation for continual growth.

Since the signing of the environmental education bill, these partnerships have continued to network and strengthen one another. The partnerships have expanded to include others across the State, which reinforces the foundation for a strong environmental education program.

I'd like to read just a little bit of what the legislative intent was for environmental education. The intent of the legislature, the public schools, community colleges, State universities and State agencies, provide a continuing awareness of essential mission, to preserve the earth's capacity to sustain a quality of life in the most healthful enjoyable and productive environment possible.

It is the future intent—further intent of the legislature, that the public schools, community colleges, State universities, and State agencies, integrate environmental education throughout the educational system and public education programs so that awareness of the students and the general public is thorough, continuous and meaningful.

The key elements in the Environmental Education Act illustrate the strength that the partnerships play in taking an idea to reality. The Environmental Education Act is comprised of five major elements that I would like to highlight.

The first component—and being a teacher I always bring things to show. The first component of the Environmental Education Act is the Governor's Task Force on Environmental Education. The Governor's Task Force on Environmental Education was created to develop a comprehensive plan for environmental education, which would articulate and coordinate all the environmental education activities within our State.

The task force was comprised of 31 members representing a broad spectrum of interest in environmental education in Arizona. Special care was made to ensure a committee that did not favor one perspective or approach to environmental education. The document was produced in 1992, and has five major goals, 14 objectives, and 92 specific action recommendations.

The structure of the plan focused on the original legislative mandate, which was to develop a document that would help guide the integration of environmental education programs in Arizona, on a statewide basis, so that the awareness of students and the general public is thorough, continuous and meaningful.

Because the Governor's Task Force ceased to exist when the plan was finalized, there was a vital need for long-term oversight. The Governor's advisory counsel on environmental education was created by legislative act in 1992. This group, comprised of three representatives from each of the following: education, State agencies, and business, has the current responsibility for oversight of the plan's acceptance and—acceptance and implementation, as well as annual updates and reports to the Governor and legislature.

The second component of the Environmental Education Act is the license plates. The license plate was created to fund aspects of the statewide Environmental Education Initiative. Through a statewide competition, sponsored through the Governor's office, the environmental plate was selected.

The environmental plate, considered a specialty plate, costs an annual \$25, of which \$17 is considered a donation to the Environmental Education Fund, established at the Arizona Department of Education.

Since October of 1992, to the end of the fiscal year in June of 1993, the environmental plate has generated almost \$150,000. Within the first two months of the fiscal year, it has generated over \$35,000. The Environmental Education Fund was established at the Department of Education for the purpose of providing moneys for personnel and other expenditures necessary to assist school districts in implementing environmental education programs, as well as to provide teacher training.

The superintendent of public instruction, C. Diane Bishop, is responsible for administering the funds. Besides the moneys for the fund are generated from the sale of the license plate, we can also get money from donations and legislative appropriations.

Through a partnership developed with the Arizona Department of Transportation and the Arizona Department of Education, the

ordering and distribution of statewide environmental license plates has made the efforts of meeting the public demands manageable.

The third component of the environmental Act addresses instruction in environmental education. School districts are required to develop and implement programs which integrate environmental education into the curriculum. Programs shall be designed to help students develop an understanding of the importance of the environment, develop an awareness of the environment, promote knowledge of environmental concepts, develop positive attitudes and values towards the environment, and encourage civic and social responsibility towards environmental issues.

Students will be assessed as to the extent to which they have developed an understanding of the importance of the environment to the future of this State and its citizens. The Department of Education in collaboration with many educators, agency personnel, and individuals representing nonprofit organizations have developed the environmental education guidelines; this massive document here.

It illustrates how environmental education concepts can be integrated with 10 of our State essential skills. Many States don't have so-called essential skills. But there are 11 essential skills at the Department of Education which districts use to help them develop their curriculum.

Department of Education is also responsible for establishing an information resource system. The resource system has been identified as two components: resource center sites and telecommunications system. The first set of resource centers will be established this year, 1993-1994, and they will provide educators with a variety of resources and materials, as well as the location for educational development.

Contact with potential sites have been made in Flagstaff, Phoenix, Tucson, Yuma and Nogales. Several interested resource centers, such as the Tucson Children's Museum, the University of Arizona, Northern Arizona University, and the Flagstaff Arboretum, just to name a few, gathered in Flagstaff, and some gathered in Tucson, to articulate what they had to offer and how they could work together to reinforce the integration of environmental education throughout their community. The partnerships initiated at these meetings have continued to support one another over the past year.

The second component of the resource system is ADE's Department of Education telecommunications system. The telecommunications system allows educators statewide to communicate easily, and it also provides an inventory of environmental education resource speakers, courses, workshops, and field trip sites. Several agencies and organizations have expressed an interest to input information on that system.

The fourth component outlined the responsibility of the universities. The universities are responsible for incorporating environmental education into the teacher training program, and are encouraged to integrate environmental education into current courses.

In collaboration with the Arizona Department of Education and other recognized environmental education programs, the univer-

sities are providing already many programs to certified teachers, and have been integrating environmental education into their pre-service program.

The fifth component, and the last that I'll talk about today, is the Interagency Committee on Environmental Education. Interagency Committee is comprised of 15 State agencies as identified by the Environmental Education, to coordinate the activities of State agencies in environmental education. The purpose of the committee is to encourage the coordination of interagency activities regarding environmental education, and promote the efficient distribution of information, and facilitate the planning and development of educational materials.

They're also responsible for the development in maintaining the memorandum of understanding to specific methods by which the agencies can share their resources to benefit environmental education, and to assist in statewide environmental education.

That's a brief overview of the mandate. What I'd like to do now is to highlight a few of the other partnerships that have developed. With the development of the Environmental Education guidelines, many people from the school districts, the universities, businesses, private organizations, worked together into wee hours of the morning on this document they collaborated. It represents an attempt to develop a truly integrated approach to a given focus of study.

Also, the community of individuals working in and for environmental education is very broad and supportive. Upon the hiring of myself to the Department of Education, the Arizona Public Service, APS, and Arizona Clean and Beautiful, initiated a networking breakfast for the Maricopa County Environmental Education Community.

The purpose of that breakfast was to introduce the new environmental education specialist to individuals responsible for programs that deal with environmental topics, and to make them aware of the comprehensive plan for environmental education.

The breakfast was well attended. The contacts made were invaluable, and the partnerships developed have continued to flourish over the years. The Interagency Committee on Environmental Education is an excellent example of how building partnerships among State agencies can produce multiple quality events.

Over the past two years the Interagency Committee has sponsored several environmental events. The first one was February 1992, where they had a mini-summit on environmental education. This brought together over 250 environmental educators to look at the new comprehensive plan for environmental education and to begin to build networks.

The second major event sponsored by the Interagency Committee as the Environmental Education Resource Fair, which was held in March of 1993. Over 750 participant's attended the fair, where they could gain information where they could attend informational workshops, presentations, and touring an exhibit hall.

We have another one scheduled for 1994, and we believe that the sponsorship for that is going to broaden. It's going to include the Governor's Advisory Counsel, several Arizona businesses and industries and organizations. The Interagency's hope is that the en-

ergy and support generated by these partnerships will result in an even more comprehensive resource fair.

Am I running out of time? Okay.

Ms. ENGLISH. Can you summarize a little bit.

Dr. ALLEN. You bet I can. I think one other really important thing I'd like to highlight is a statewide environmental organization called Arizona Association for Learning About the Environment. They just recently held their 14th annual conference, which brings environmental educators, people from the Federal and State agencies, business people, community members, parents and so forth, together to network and talk about the environment. It's been a very active organization in our State.

And I believe that's it. Thank you, very much.

[The prepared statement of Dr. Allen follows:]

PUBLIC TESTIMONY BEFORE
ELEMENTARY, SECONDARY EDUCATION ACT SUB-COMMITTEE

October 16, 1993, Mesa, Arizona

~~Dr. Kristina Allen~~

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Madam Chair and Members of the Sub-committee, My name is Dr. Kristina Allen, Environmental Education Specialist with the Arizona Department of Education. I would like to thank the Elementary, Secondary Education Act Sub-committee (ESEA) for the opportunity to speak on partnerships in environmental education using Arizona as an example. Partnership models that have been successfully implemented in Arizona will work elsewhere in the United States to support quality education and improve our environment.

Environmental Education (EE) in Arizona has a rich history of partnerships between various entities. In 1990, the Arizona Environmental Education Act was developed through the support of partnerships between education (K-university), businesses, organizations and agencies. Congresswoman English's guidance and efforts played a key role in these undertakings. Arizona is in the forefront nationally in regards to EE. I recently returned from the North American Association for Environmental Education (NAAEE) conference where I was very proud to be representing Arizona. Many states are looking to Arizona for guidance in EE and are greatly impressed with our well articulated and comprehensive Environmental Education Bill. Congresswoman English, at that time Representative

English, was a key player in the drafting of the Environmental Education Legislation. Representative English had the foresight to assemble a diverse group of individuals representing state agencies, businesses, nonprofit organizations and educators - kindergarten through post college - to create legislation that would reflect the partnerships that are necessary to build a foundation for continual growth. Since the signing of the EE Bill these partnerships have continued to network and strengthen one another. The partnerships have expanded to include others across the state which reinforces the foundation for a strong environmental education program.

The Environmental Education Act is a very diverse piece of legislation.

It was the intent of the Legislature that:

... the public school, community colleges, state universities and state agencies provide a continuing awareness of the essential mission to preserve the earth's capacity to sustain a quality of life in the most healthful, enjoyable and productive environment possible. It is the further intent of the Legislature that the public schools, community colleges, state universities and state agencies integrate environmental education throughout the educational system and public education programs so that awareness of students and the general public is thorough, continuous and meaningful.

The key elements in the EE Act illustrate the strength that partnerships play in taking an idea to reality. The EE Act is comprised of five major components which I would like to highlight.

The first component of the EE Act is the Governor's Task Force on Environmental Education. The Governor's Task Force on Environmental Education was created to develop a comprehensive plan for which all EE activities in Arizona can be coordinated. The Task Force was comprised of 31 members representing a broad spectrum of interests in EE in Arizona.

Special care was made to ensure a committee that did not favor one perspective or approach to EE. The document that was produced in 1992 has five major goals, 14 objectives and 92 specific action recommendations. The structure of the plan focused on the original legislative mandate which was to develop a document that would help guide the integration of environmental education programs in Arizona on a statewide basis so that awareness of students and the general public is thorough, continuous and meaningful. Because the Governor's Task Force ceased to exist when the plan was finalized, there was a vital need for long-term oversight. The Governor's Advisory Council on Environmental Education was created by legislative act in 1992. This group, comprised of three representatives from each of the following areas: education, state agencies and business, has the current responsibility for oversight of the Plan's acceptance and implementation, as well as annual updates and reports to the Governor and Legislature. This group is in place and meeting on a monthly basis.

The second component of the EE Act is the Environmental License plate created to fund aspects of the statewide EE initiative. Through a statewide competition, sponsored through the Governor's office, the E License plate was selected. The E License plate, considered a speciality plate, costs an annual \$25 of which \$17 is considered a donation to an EE Fund established at the Arizona Department of Education (ADE). Since October of 1992 to the end of the fiscal year, June 30, 1993 the E License plate has generated over \$100,000 for the EE Fund. The EE Fund was established at the ADE for the purpose of providing monies for personnel and other expenditures necessary to assist school districts in implementing environmental education programs, as well as to provide teacher training. The Superintendent of Public Instruction is responsible for administering

the funds. Monies for the fund are generated from the sale of the E License plate, but may come from donations and legislative appropriations. Through a partnership developed with the Arizona Department of Transportation and the ADE the ordering and distribution statewide of the E License plate has made the efforts for meeting the public's demand for the plate manageable.

The third component of the EE Act addresses instruction in EE. School districts are required to develop and implement programs which integrate EE into the curriculum. Programs shall be designed to help students: develop an understanding of the importance of the environment; develop an awareness of the environment; promote knowledge of environmental concepts; develop positive attitudes and values towards the environment; and encourage civic and social responsibility toward environmental issues. Students will be assessed as to the extent to which they have developed an understanding of the importance of the environment to the future of this state and its citizens. The ADE in collaboration with many educators, agency personnel and individuals representing nonprofit organizations have developed the EE Guidelines document which illustrates how EE concepts can be integrated with 10 of our state Essential Skill documents. Each school district will receive a copy to assist them in the development of their EE program.

The ADE is also responsible for establishing an information resource system. The resource system has been identified as two components: 1- resource center sites and 2- a telecommunication system. The resource center sites will be established this year, '93-'94 and will provide educators a variety of resources and materials, as well as a location for educational development. Contacts with potential sites have been made in

Flagstaff, Phoenix, Tucson, Yuma and Nogales. Several interested resource centers (Tucson Children's Museum, University of Arizona, Northern Arizona University, The Flagstaff Arboretum, etc.) gathered in Flagstaff and in Tucson to articulate what they had to offer and how they could work together to reinforce the integration of EE throughout their community. The partnerships initiated at these meetings have continued to support one another over the past year. The second component of the resource system is the ADE's telecommunication system. The telecommunication system will allow educators statewide to communicate easily and will provide an inventory of EE resources, speakers, EE courses and workshops and fieldtrip sites. The ADE will network with other agencies, educational institutions and nonprofit organizations to maintain a current information system.

The fourth component of the EE Act outlines the responsibilities of the universities. The universities are responsible for incorporating EE into the teacher training programs and are encouraged to integrate EE into current courses. If new courses are established they should concentrate on ecological concepts and methods of teaching and include the following: increase awareness of environmental issues, promote knowledge of environmental concepts, develop positive attitudes and values toward the environment and encourage civic and social responsibility toward environmental issues. In collaboration with the ADE and other recognized environmental education programs, the universities should provide EE training programs for certificated teachers. These programs should include the topics described above and may include: 1- workshops on EE provided at universities, in school districts or at conferences and 2- special institutes on EE for teachers that provide information and knowledge and then

encourage teachers to share the information with others in their school district.

The fifth component of the EE Act describes the composition and the responsibilities of the Interagency Committee on Environmental Education. The Interagency Committee is comprised of 15 state agencies as identified in the EE Act to coordinate the activities of state agencies in EE. The committee shall: 1- encourage the coordination of interagency activities regarding EE, promote the efficient distribution of information and facilitate the planning and development of educational materials; 2- develop and maintain a memorandum of understanding to specify methods by which the agencies can share their resources to benefit EE in this state; 3- assist in statewide EE; and 4- provide a link between this state and federal and local agencies and departments relating to EE.

With this brief overview of the major components of the EE Act, I will further highlight some of the key points and events that have occurred over the past year and illustrate how partnerships have supported their existence.

The ADE has developed the EE Guidelines to assist school districts with the integration of EE into the curriculum. The EE Guidelines was created as a bridge. It outlines how EE can be integrated into all curriculum areas through Arizona's current Essential Skills. It also illustrates how specific Essential Skills can be taught through an environmental theme. This document represents an attempt to develop a truly integrated approach to a given focus of study. The EE Guidelines were developed by a committee comprised of individuals representing education, state and federal agencies and organizations. The broad

spectrum of interests and experiences that these individuals brought to the development project resulted in a comprehensive, complex document on EE.

The community of individuals working in and for EE is very broad and supportive. Upon the hiring of the EE Specialist at the ADE, Arizona Public Service (APS) and Arizona Clean and Beautiful initiated a Networking Breakfast for the Maricopa County EE community. The purpose of the Breakfast was to introduce the new EE Specialist to individuals responsible for programs that deal with environmental topics and to make them aware of the Comprehensive Plan for Environmental Education. The Breakfast was well attended, the contacts made were invaluable and the partnerships developed have continued to flourish over the year.

The Interagency Committee on EE is an excellent example of how building partnerships among state agencies can produce multiple, quality events. Over the past two years the Interagency Committee on EE has sponsored several EE events. In February of 1992 the Interagency sponsored the first mini Summit on EE in Arizona. This event brought together over 250 environmental educators to look at the new Comprehensive Plan for EE and to begin to build networks.

The second major event the Interagency sponsored was Arizona's first EE Resource Fair in March of 1993. Over 750 participants attended the fair where they could attend informational workshops, presentations and tour an exhibit hall with representatives from over 100 organizations, schools, agencies and businesses with continuous EE programs. The second fair has been scheduled for March of 1994 and will be sponsored by the Interagency Committee, the Governor's Advisory Council on EE, several

Arizona business/industries and organizations. It is the Interagency's hope that the energy and support generated by these partnerships will result in an even more comprehensive resource fair.

The first annual Educator's Academy for EE was the third major event hosted by the Interagency in June at Embry-Riddle University outside of Prescott, Arizona. The Academy participants represented a diverse mix of educators and administrators, agency people, business/industry representatives and community members. The Academy was eight days long and included an intensive agenda for participants. Each participant developed a personal or team action plan to implement what they had learned back in their community. A series of regional follow up workshops will be held for the participants in the spring of 1994.

Other partnerships that have been developed around the state are numerous and include the following: The Arizona Association for Learning In and About the Environment (AALE) is a statewide environmental nonprofit organization comprised of over 800 members representing formal and nonformal education, state and federal agencies, nonprofit organizations, business/industry and a collection of interested individuals. AALE recently hosted its 14th annual conference which provides the membership an opportunity for networking - the sharing resources and materials, an awareness of programs and events, the providing of natural history information and an opportunity to share a beautiful environment with friends. In addition to statewide EE efforts there are many regional EE groups. One such group is the Tucson Basin Group (TBG) which is comprised of environmental educators representing business/industry (ex-Tucson Electric Power Company), formal educators (K-Adult/University

levels), nonprofit organizations (ex-Environmental Education Exchange) and agency personnel (ex Arizona Game and Fish) that meets bi-monthly to network. In the Maricopa area a cooperative venture between the Water Users Association, Water Resources Department, the 4-H Association and others has been created to develop materials on water for grades 6-8. These types of cooperative ventures where minimal resources are combined result in comprehensive projects that benefit a larger group of people. Another EE partnership are the Natural Resource Conservation District (NRCD) Resource Centers that are scattered around the state located mostly in rural communities. The NRCD's build partnerships in their community to provide resources and support in environmental/conservation education. These are only a few of the many partnerships working on behalf of EE that exist around Arizona. As groups and individuals interested in the environment continue to reach out to others the partnerships in EE will continue to grow.

The goal for EE in Arizona is to develop the most environmentally literate and responsible citizenry in our state: citizenry that will approach environmental issues with positive attitudes, understanding and a commitment to resolving the issues or remediating the problem. This goal can best be achieved by developing strong partnerships across agencies, educational institutions, business/industries and organizations throughout Arizona and the nation. A strong foundation layed for EE through diverse partnerships will result in a unified effort and provide greater results than single groups or individuals working solo. The momentum for EE in Arizona has been steady and strong over the past year which reinforces

the continued efforts given to developing partnerships between the various entities in our state and across the nation.

I would like to thank Congresswoman English and the ESEA Subcommittee for the opportunity to present. I hope my comments have been useful. I will be glad to answer any questions you may have.

Ms. ENGLISH. Thank you, Dr. Allen.

I'd like to start with a simple question, but a complex answer. And I'm sure—you guys can't hear back there? Okay. Let's take a two-minute break here while we get some new mikes hooked up so that the folks in the audience can hear.

[Recess.]

Ms. ENGLISH. I apologize for not being able to hear in the back. And if you could speak into the—

Mr. LOSH. Sure.

Ms. ENGLISH. Which one is it, that one? I'd appreciate that so everyone can participate.

As I was stating before we made the brief changes here, I have a simple question for a much more complex answer that I'd like all three of you to attempt to answer, and that has to do with funding. I think all three of you mentioned in your comments in one form or another, a commitment to funding. I know that I can't—let's see if I can find the testimony here.

One of you talked a little bit about having the—something to stipulate and encourage partnerships. And I know that would be some kind of a funding or revenue incentive, and so I'd like all three of you to take a few minutes and share some of your ideas on potential funding resources. It's very difficult these days for the Federal Government to say here's some money. But we need some creative approaches to coming up with funding resources like the license plate has generated for that particular program.

Could we start with you.

Mr. LOSH. Sure.

Ms. ENGLISH. And just share your thoughts on funding and what the Federal Government can do to facilitate this process.

Mr. LOSH. Thank you. I guess—am I on back there? Fine.

Yes. Money, of course, is a very complex process and activity, as you're well aware in these times. What we've discovered in our Work Force Compact activity, the funding requirements or partnerships, as I indicated earlier with some of the larger business and industries, funding does not seem to be a big problem for those particular groups. The funding problem is with smaller businesses. And the fact that for a partnership to exist and for students to be onsite working with those particular small businesses, that takes away from the productive time that those individuals have in a small business.

We feel perhaps that some sort of tax advantage, perhaps on a scaled basis, might be an effective vehicle to be used in assisting small businesses and large businesses, depending on their particular need to support young people in those learning—work/learning environments.

Those individuals, as you're well aware, that are in the work/learning environments, are going to be only moderately productive in most instances because their primary purpose to be there is to learn and not to be a productive—highly productive individual.

We've also established in the State of Arizona a fund which is to receive incentives and contributions, and to be matched by the legislature for improving vocational technical education, primarily for implementing the model. And we do have this vehicle in place,

and I'm sad to state at this particular time, the amount of actual physical contributions to that fund have been very limited.

I do not know of a silver bullet out there that's going to do this particular thing, but some sort of tax incentive advantage for smaller business, where I see the big problem being, will certainly be helpful.

Mr. OESTER. Thank you. As president of a nonprofit organization, we rely heavily on contributions and grants. The corporate contributions aren't that difficult to go after. The problem is that the grants from the Federal Government are so scattered, so spread out, that we have to go through—we're dealing with three agencies right now: education, labor and commerce. Each department has its own programs, and under that are a lot of "X" number of dollars for each program. If we qualify under one agency, we can go after five grants, but it's so small, that it won't do anything for us.

If there is the ability to look at combining and making a pooling of the money to go after—for applicants to go after so that they can fund their projects, put them together faster, and then you have an end result. Otherwise, we're looking at possibly a year, two years delay just in trying to do a type of project that's good—that we think is good for everyone.

Thank you.

Dr. ALLEN. Well, I want to preface this first. I've been in the department a little over a year, and the environmental group in our State has been working a long time setting a foundation in partnership and so forth. And I think that's a good example of—of the environmental education bill, and the license plate that is supporting that program.

However, I did speak to somebody that's been very active in environmental education for a long time in our State, to get some ideas for this—this meeting today, since I'm relatively new to this arena. And our—some of the thoughts that he brought up was that in the past, I believe environmental education funds at the Federal level were offered through the Department of Education. Now there's quite a bit of money through the Environmental Protection Agency. And his thoughts were, and I have to agree, that it would be really nice if those different groups could articulate and work together, and that moneys could come maybe from all of them versus separate granting funds from each of them.

But the articulation between those Federal agencies, which would then set a model for the different States, so that the States then would see that they also need to articulate very closely in how they provide moneys out to schools or to other entities as well. And I think, too, that oftentimes—I know recently I looked at an EPA grant that you could request \$250,000 over a period of time. That's a lot of money. And for a State systemic or a large systemic movement, that might be what's necessary. But maybe smaller pots of money to provide more people opportunities to put programs in place or to extend programs that have been very successful, might be another way of looking at funding.

Ms. ENGLISH. Okay. Jeff, on my staff over here, handed me a note giving me a little bit of background about one of Mr. Oester's concerns being able to combine the funds. I agree that the grants can be so small that individually they are not helpful. One of the

changes that are being considered this year is whether to broaden the Secretary's ability to identify areas where joint funding of programs can take place.

And so obviously this is of great concern, and not only just Arizona. I appreciate those comments.

Jolene, do you have some questions?

Mrs. UNSOELD. Thank you. Mr. Oester, you used a phrase that I hope will jump into what I'd like to hear from you: grant hoops and loops. I think probably many of you have heard of the Vice President's program on reinventing government to try to cut some of the red tape. And so probably, in addition to the need to combine grants to make them more efficient, I bet you're all aware of where there seems to be duplication. This is a real handicap in making the best use of the funds that you do have available, because of either Federal or State requirements.

Can you give us some suggestions on cutting red tape.

Mr. LOSH. Go ahead.

Mr. OESTER. Thank you. I think there's a situation here that, over the years—and it's throughout both public and private sectors. We have expanded, without any kind of control as to where we're really headed and where we're going. And I think there has to be a look at, in that spirit of reinventing government, refocusing, if you will, that combine some of the agencies together that perhaps have been doing things separately, yet border on functioning the same way.

In our process of writing grants, the little variations that each Department has is ridiculous. They're basically the same. They're asking for the same things, but because one agency is funded under this way, they put a sentence in there, they put a few words that are different. And we have to really look at the program overall and what we are trying to accomplish.

I don't know if I have the exact answer on reinventing government myself, but I think if we start refocusing and looking at the bigger picture, if you will, as to what we're trying to do as a Nation and a society, that a lot of it will just come in and reshape itself.

Thank you.

Mr. LOSH. Well, unfortunately I haven't thought of a real swell answer since my time to think about it. But one of the problems that we face in our own little red-tape riddled bureaucracy is the fact that funds are very, very targeted to very, very special purposes and specific client groups. That is both good and bad.

It's good in the sense that it's able to more directly utilize those resources. It's bad in a sense that we just heard here wherein given funds that are so narrowly targeted, they can't be used in purposes other than what they're designed for.

There is perhaps some ability at the Federal level to provide discretion at the State and local level for these particular activities and put funds together in larger pools which have like purposes. And I'm sure that the reinventing government Vice President Gore's reinventing government activity among the many years are directed toward that particular end. And I don't have to tell you special interest groups that represent special clients are very, very strong in their wishes to having those committees being targeted.

But looking at the targeting, looking at the client group those are designed for, and the purpose, and more like verbiage in those particular bills, would be very, very helpful I think.

Dr. ALLEN. I'm not sure I can add much to that, but one thing that comes to mind is that oftentimes—let me get my thoughts here together a minute—that we have wonderful models, projects that are working well, and we keep—even though we say we want to continue to fund those because they've been successful, actually they're looking for new creative things every time you write a grant.

So maybe what we need to do is look at the models that are very successful and how they've been successful, and let's take those models and try those models in other communities, and try them in other places instead of always asking for new creative things in grants, because there are a lot of good things that have worked out there. And then maybe use some of the people that have really successful grants as mentors.

Maybe they go out and they do some onsite visits instead of having everything in the grant form, which sometimes is really narrowing. Allow some of the groups that have success, let them be some of the mentors that go out and observe and look at those new grants.

Ms. ENGLISH. Thank you, very much. I appreciate the testimony of the first panel and their time spent on a Saturday to come down here and be part of the congressional record.

I'd like to invite the second panel to come forward now. The second panel is Ms. Colleen Thomas, Ms. Debbie Tolman, Ms. Stephanie Connor, Ms. Virginia Guy.

Colleen Thomas is a member of the Board of Directors, Mesa Chamber of Commerce. She has been a resident of Mesa for 22 years. She has four children who attended Mesa public schools. She served as a chairwoman of the Chamber's Education Committee, and a member of their Education Business Cooperative Partnership. Lastly, she's a member of the Mayor's Committee for Educational Excellence with the City of Mesa. Thank you for being here.

Ms. THOMAS. Are we supposed to use the mike?

Ms. ENGLISH. Yes, if you would. The little mikes will get you on the record, but the big mike will let everybody else hear too.

STATEMENTS OF COLLEEN THOMAS, MEMBER, BOARD OF DIRECTORS, MESA CHAMBER OF COMMERCE; DEBRA TOLMAN, EXECUTIVE DIRECTOR, MESA FOUNDATION FOR EDUCATIONAL EXCELLENCE; STEPHANIE CONNOR, COMMUNITY EDUCATION SPECIALIST, MOTOROLA SEMICONDUCTOR PRODUCTS SECTOR; AND VIRGINIA GUY, DIRECTOR, MESA PUBLIC SCHOOL CAREER LADDER

Ms. THOMAS. Well, thank you for the opportunity to speak concerning my interest in partnerships and education. In looking at education today, one must readily acknowledge that we must face, head on, the issue of quality. And most of us will agree that too many students are receiving a watered-down curriculum. And that for many students the expectations are too low.

Changes in education must happen and must be the result of the development of higher standards, the encouragement of the understanding that performance counts, and the creation of partnerships.

Partnerships suggests a willingness to work together. In the case of partnerships in education, the partners may include government, community organizations, businesses, parents and educators. Working together, partners help each other to achieve a common goal. That goal should be quality education for our children as they prepare to enter the expanding global economy.

An educator by profession, I left the classroom a number of years ago to raise our children. In the mode of being once an educator always an educator, I continued to be involved with young people in various community groups, advisory boards and committees.

In 1985 I became involved in the business world. As owner of the learning center, whose service it is to tutor the young people on a one-to-one basis, I found myself in the unique position of being a one-person business education partnership. As I progressed from becoming a business education partner to seeing a need to create an atmosphere for business education partnering in our community, I've realized that business and education often speak different languages.

Business is by definition proactive. Business people are trained to see a problem, analyze that problem, list suggestions, make a choice for action, and then just do it. Generally, educators are reactive. Their problem-solving procedure is similar, but bureaucracy is cumbersome and their choice so broad that choice and action happen much more slowly than in the business world.

Several groups have formed in Mesa in recent years to address the issue of improving education. All of these groups in one way or the other are in various stages of addressing business community education partnerships. Information on several of these groups is included in the written packet which I've provided.

They included the Mesa Chamber of Commerce Education Committee. This began as a task force and is now a standing committee of the Mesa Chamber of Commerce. Its mission is to recommend positions on educational policy to the board of directors and to its membership of approximately 1,400 businesses. It develops specific tasks to get the business community actively involved in education. Last year the main thrust of this committee was to develop pilot partnership projects to serve as examples for its business members, and examples of that are also in the packet.

The Mesa Foundation for Educational Excellence is another one of these groups. This private nonprofit organization provides programs and funding for the Mesa public schools, increases community involvement in schools, and develops business education partnerships—Debbie Tolman will speak in depth about this group.

The Mayor's Committee on Educational Excellence. The goal of this group is to recommend to the City of Mesa ways to promote cooperative ventures with education. Last spring they sponsored the Mayor's Expo, which highlighted business involvements in the schools. The committee's now in the process of developing programs which will reward excellence in education and service to the school and community.

The Education Business Cooperative Partnership is a direct result of the recent Mesa visioning process sponsored by the Mesa Chamber of Commerce. As its name suggests, its members are working to develop partnerships between business and our schools to improve the quality and relevancies of education in our community.

As I continue to serve as a member of all these committees, and to network among them, it has become very clear that businesses want to participate in and to coordinate partnerships. Educators want to participate in partnerships. Multiple groups exist who are interested in supporting and encouraging partnerships. Definitions and perception of partnerships differ. Businesses often do not know how to participate. Educators sometimes are not sure what they need. No one organization exists to jointly plan mutual goals and activities of partnerships.

The groups which I've talked about have the very real possibility with the Mesa Chamber of Commerce through its Education Committee and Education Business Cooperative Partnership Committee, serving as a catalyst, and the Mesa Foundation for Educational Excellence serving as a clearinghouse of developing the "can do" attitude of working together that must exist for business and community organizations to be true partners with education into the next century. Bearing in mind that the business community is the originator of wealth and therefore of the money that funds education, and that the business community is the recipient and beneficiary of our educational system, one must conclude that it is of the utmost importance to the entire community that the products of our educational system are excellent.

As we approach the year 2000, we are increasingly aware that our prosperity hinges on education. We must build for the future with the power of knowledge. Educators must expect more and demand more. Partnerships are key to developing a workforce prepared for the challenges of our economy, which grows increasingly global in scope, and for the process of lifelong learning.

Make no mistake, however, partnerships cannot and should not take the place of solid fiscal planning by our educators, or of intelligent funding by our legislators. There is one additional fact that we, parents, educators, business people, community leaders, and legislators alike must face: While the opportunity for quality education is the right of every United States citizen, success and education cannot be guaranteed but must be determined by each individual student.

Thank you.

[The prepared statement of Ms. Thomas follows:]

~~Statement~~ of Colleen M. Tnoas
 Thank you for the opportunity to speak concerning my interest in partnerships in education.

In looking at education today one must readily acknowledge that we must face head-on the issue of quality. Most of us will agree that too many students are receiving a watered down curriculum and that for many students the expectations are too low. Changes in education must happen and must be the result of the development of higher standards, the encouragement of the understanding that performance counts, and the creation of partnerships.

Partnership suggests a willingness to work together. In the case of partnerships in education, the partners may include government, community organizations, businesses, parents, and educators. Working together partners help each other to achieve a common goal--that goal should be quality education for our children as they prepare to enter the expanding global economy.

An educator by profession, I left the classroom a number of years ago to raise our children. In the mode of being "once an educator, always an educator", I continued to be involved with young people in various community groups, advisory boards and committees. In 1985 I became involved in the business world. As owner of The Learning Center whose service it is to tutor young people on a one-to-one bases, I have found myself in the unique position of being a one person business/education partnership.

As I have progressed from becoming a business/education partner to seeing the need to create an atmosphere of business/education partnering in our community, I have realized that business and education often speak different languages. Business is by definition proactive. Business people are trained to see a problem, analyze that problem, list solutions, make a choice for action, and then "just do it." Generally educators are reactive. Their problem solving procedure is similar, but bureaucracy is cumbersome and their scope so broad that choice and action happen much more slowly than in the business world.

Several groups have formed in Mesa in recent years to address the issue of improving education. All of these groups, in one way or another, are in various stages of addressing business/ community/ education partnership. Information on several of these groups is included in the written packet I have provided. These groups include:

- * Mesa Chamber of Commerce Education Committee--This began as a task force and is now a standing committee of the Mesa Chamber of Commerce. Its mission is to recommend positions on educational policy to the board of directors and to its membership of approximately 1400 businesses. It develops specific tasks to get the business community actively involved in education. Last year the main thrust of this committee was to develop pilot partnership projects to serve as examples for its business members. (See fact sheet)
- * Mesa Foundation for Educational Excellence--This private, non profit organization provides programs and funding for the

Mesa Public Schools, increases community involvement in the schools, and develops business/education partnerships. Debbie Tolman will speak in depth about this group and its mission.

- * Mayor's Committee on Educational Excellence--The goal of this group is to recommend to the city of Mesa ways to promote cooperative ventures with education. Last spring this group sponsored the Mayor's Expo which highlighted business involvement in the schools. The committee is now in the process of developing programs which will reward excellence in education and service to the school and community.
- * Education Business Cooperative Partnership--This committee is a direct result of the recent Mesa visioning process sponsored by the Mesa Chamber of Commerce. As its name suggests, its members are working to develop partnerships between business and our schools to "improve the quality and relevancy of education in our community." (see mission statements entitled **Education 2020**)

As I continue to serve as a member on all these committees and to network among them it has become very clear that:

- * Businesses want to participate in and to coordinate partnerships;
- * Educators want to participate in partnerships;
- * Multiple groups exist who are interested in supporting and encouraging partnerships;
- * Definitions and perceptions of partnership differ;
- * Businesses often do not know how to participate;
- * Educators sometimes are not sure what they need;
- * No one organization exists to jointly plan mutual goals and activities.

The groups which I have talked about have the very real possibility, with the Mesa Chamber of Commerce through its Education Committee and Education Business Cooperative Partnership Committee serving as catalyst and the Mesa Foundation for Educational Excellence serving as clearing house, of developing the "can do" attitude of working together that must exist for business and community organizations to be true partners with education into the next century.

Bearing in mind that the business community is the originator of wealth and, therefore, of the money that funds education, and that the business community is the recipient and beneficiary of our education system, one must conclude that it is of the utmost importance to the entire business community that the products of our educational system are excellent. As we approach the year 2000 we are increasingly aware that our prosperity hinges on education. We must build for the future with the power of knowledge. Educators must expect more and demand more. Partnerships are key to developing a work force prepared for the challenges of our economy which grows increasingly global in scope and for the process of life-long learning. Make no mistake, however, partnerships cannot and should not take the place of solid fiscal planning by our educators or of intelligent funding by our legislators. There is one

additional fact that we, parents, educators, business people, community leaders, and legislators alike, must face--while the opportunity for quality education is the right of every U.S. citizen, success in education cannot be guaranteed but must be determined by each individual student.

Colleen M. Thomas
Board of Directors
Mesa Chamber of Commerce

The Learning Center a division of Dr. Phillips Learning Center, Inc.
777 West Southern #301
Mesa, Arizona 85210

Ms. ENGLISH. Thank you. Ms. Debbie Tolman, Executive Director Mesa Foundation for Educational Excellence. Ms. Tolman has been a resident of Arizona for 16 years, a Mesa resident for nine years. She has four children educated in the Mesa School District, and is a member of the Education Business Cooperative Partnership. She also works for the Mayor and Chamber's Education Committees. And one program I'm very familiar with—she worked with the "kids voting" pilot program.

Welcome.

Ms. TOLMAN. Thank you. Thank you for this opportunity. Today I would like to focus on a specific kind of education partnership that is developing at a very rapid pace throughout the entire Nation. It began in 1983 from a Ford Foundation Initiative to establish local education funds that use private money to positively impact public education. These funds are private nonprofit and are financially independent of the school district.

Given the decreased financial support school districts are receiving, citizens and school officials are earnestly looking to these private local education funds for support. A local fund can provide dollars for pilot or special programs of financial risk that school districts cannot afford.

The independent nature of these local education funds means that they are also able to serve as community conveners. Today there are somewhere between 1,000 and 1,500 of these funds. The funds range in size from those having an annual budget of a few hundred dollars to those with budgets well over \$10 million. The impact of a local education fund can be tremendous.

Some of the existing funds are linked together through a national organization, the Public Education Fund Network, PEFNet. It is the mission of PEFNet to link and unite these local education funds and to work with them to mobilize the energy and resources of their communities to build effective and successful public schools.

Located in Washington DC, PEFNet is an effective national voice for the local funds. In one of the publications of PEFNet, it is proposed that education reform demands that all community members be engaged in the discussion of promotion of quality public education. Citizens have assumed that ideas for education reform come only from the education community. Through public schools, however, we are all engaged in a process of strengthening and sustaining our communities, child by child, teacher by teacher, and family by family.

Public schools are dependent upon public dollars. Thus the reform relies not upon infinite model projects, but compelling the entire public to support quality public education in their communities. This requires engaging individuals in groups who have been previously reluctant to participate, or overlooked, in the deliberations and discussions of education improvement.

Mesa Foundation for Educational Excellence is a local education fund. Established in 1986, it is committed to creating partnerships between the community and its schools. Its organizers envisioned a cooperative effort that would ensure a high quality education for all students of the Mesa Public Schools. The foundation has nur-

tured programs of the Mesa district. These are outlined in the written material.

Currently, the foundation provides four programs for the Mesa district. One of the most exciting ventures is the mini-grant programs. Mini-grants bring innovative classroom ideas to life. Through mini-grants, students have improved their skills and expanded their horizons. Our teachers' imaginations have soared and our students have been the winners.

While classroom instruction is the core of the educational program, many students need one-on-one assistance not generally available during the schoolday. The foundation, in a effort to meet this need, has developed a new tutoring program. This year the pilot site will serve students from 11 schools. Eventually this program will provide afterschool tutoring centers at each of the junior high sites, serving students at every grade level.

Each center will be staffed by a trained coordinator and community volunteers. Through our mentor programs, students with potential who are lacking direction are paired with community role models. Citizens volunteer time to help students develop positive attitudes about life, school and their future. Acknowledgement of the importance of the teaching profession is vital to the continued well-being of our schools. The foundation's annual teacher recognition dinner honors faculty members who have reached professional educator status.

The Mesa district pursues other business partnerships. A partial list of these partnerships is included in written form. One of the most exciting districtwide partnerships is Sci Tech Saturday. Realizing the need for advanced technological experiences for students preparing to join the workforce in the next decade, McDonnell Douglas provided funds to expose children to science, mathematics, and technological experiences in the hope of instilling an enthusiasm to explore those fields as potential career choices. Mesa teachers and volunteers from McDonnell Douglas joined together to guide students through explorations of numerous science and math areas, such as robotics.

Mesa district administrators are encouraged to develop partnerships at their individual schools. Insight from one administrator included the understanding that, "Schools gain both human and physical resources to enhance their programs. Businesses gain insight and input into school curriculum and operation. In addition, schools frequently encourage their clientele to patronize participating businesses. In our free-market society there is no harm in businesses benefiting from their involvement. Business education partnerships need not be looked at as charity."

While education partnerships are exciting and vital to the improvement of our schools, they are extremely difficult and time consuming to develop and then nurture. Questions like the following must be considered: "Where will continued funding for this program come from if it is to be institutionalized?" "Will our business partners still be in business next year?" And, "What will be the effect if we lose our business partner?" among others.

Concerns of one administrator included, "Possible loss of control of the program, philosophical differences between the two parties,

and ineffective resource speakers who do not understand how to reach our students."

Federal Governmental support and incentives for business willing to participate in partnerships would motivate otherwise uninterested businesses to action. Federal agencies, whose purpose it is to support education through grant money, need to adopt a more user-friendly method in dealing with the districts they serve.

By making it easier to receive grant money, educators would be more willing to develop and nurture innovative ideas. Educators, on the whole, do not have the time or the experience to develop these complicated grants as they are now structured. Therefore, many of the new teaching methods go undeveloped.

These partnerships take tremendous efforts from all involved, and are the icing on the cake. We must not and cannot expect business partnerships to replace consistent support and funding from State and Federal Government.

Thank you.

[The prepared statement of Ms. Tolman follows:]

Debra Tolman

Thank you for the opportunity to address you today. I would like to focus on a specific kind of education partnership that is developing at a very rapid pace through out the entire nation.

It began in 1983 from a Ford Foundation initiative to establish local education funds (LEF) that use private money to positively impact public education. These funds are private, non-profit and are financially independent of the school district.

Given the decreased financial support school districts are receiving, citizens and school officials are earnestly looking to these private local education funds for support. A local fund can provide dollars for pilot or special programs - a financial risk that school districts cannot afford. The independent nature of these local education funds means that they are also able to serve as community convenors.

Today there are some..where between 1000 and 1500 of these funds. The funds range in size from those having an annual budget of a few hundred dollars to those with budgets over 10 million dollars. The impact of a local education fund can be tremendous.

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In one of the publications of PEFNet it is proposed that education reform demands that all community members be engaged in the discussion and promotion of quality public education. Citizens have assumed that ideas for education reform come only from the education community. Through public schools, however, we are all engaged in the process of strengthening and sustaining our communities, child by child, teacher by teacher, family by family. Public schools are dependent upon public dollars. Thus, the reform relies, not upon infinite model projects, but compelling the entire public to support quality public education in their communities. This requires engaging individuals and groups who have been previously reluctant to participate or overlooked in deliberations and discussions of education improvement.

To address these realities, PEFNet has begun to move its focus from funding start-up and programmatic technical assistance for school improvement to offering LEFs a programmatic and policy context for the institutionalization of effective practices system-wide. This change in approach requires LEFs to shift their focus deliberately from school improvement to systemic reform with an emphasis on building community knowledge about school issues.

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Currently, the foundation provides four programs for the Mesa district. One of the most exciting ventures is the Mini-Grant program. Mini-grants bring innovative classroom ideas to life. Through mini-grants, students have improved their skills and expanded their horizons. Our teachers' imaginations have soared, and our students have been the winners.

While classroom instruction is the core of the educational program, many students need one-on-one assistance not generally available during the school day. The foundation, in an effort to meet this need, has developed a new Tutoring program. This year, the pilot site will serve students from 11 schools. Eventually, this program will provide after school Tutoring Centers at each of the junior highs, serving students at every grade level. Each center will be staffed by a trained coordinator and community volunteers.

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Mesa district administrators are encouraged to develop partnerships at their individual schools. Insights from one administrator include the understanding that "schools gain both human and physical resources to enhance their programs. Businesses

gain insight and input into the school curriculum and operation. In addition schools frequently encourage their clientele to patronize participating businesses. In our free market society, there is not harm in businesses benefiting from their involvement. Business/education partnerships need not be looked upon as charity."

While education partnerships are exciting and vital to the improvement of our schools, they are extremely difficult and time consuming to develop and then nurture. Questions like the following must be considered: "Where will continued funding for this program come from if it is to be institutionalized?" "Will our business partner still be in business next year?" and "What will the effect be if we loose our business partner?" among others. Concerns of one administrator include "possible loss of control of the program, philosophical differences between the two parties, and ineffective resource speakers who do not understand how to reach our students."

These partnerships take tremendous effort from all involved and are the "icing on cake". We must not and cannot expect business partnerships to replace consistent support and funding from state and federal government.

Debra Tolman
Executive Director
Mesa Foundation for Educational Excellence

Mesa Foundation for Educational Excellence
P.O. Box 5054
Mesa, Arizona 85221
602-898-7872

MESA CHAMBER OF COMMERCE EDUCATION COMMITTEE

The Education Committee of the Mesa Chamber of Commerce is comprised of approximately 14 members plus a liaison from the Chamber's Board of Directors. The committee meets monthly as a group and each member of the committee takes responsibility during the year for one or more of the committee's projects. The mission of the Education Committee is to recommend positions on educational policy to the Board of Directors and to accomplish programs that support the Mesa educational system in a positive way. The primary, but not exclusive, focus of this committee is the Mesa School District, grades K through 12.

In carrying out this mission, the following goals have been established:

1. Develop specific tasks to get the business community actively involved in education;
2. Involve school board members, school administrators, teachers, and parents as representatives on its task forces;
3. Identify specific action items designed to create business/education partnerships to benefit Mesa students;
4. Recruit, when necessary, additional members to form project task forces;
5. Seek funds from outside sources to support the activities of the committee and its task forces.

During the 1992-93 year the Education Committee has developed a number of business/education partnership pilot programs. Some of these include:

- A book drive to collect books for Lincoln School homes in which there were no books;
- A tutorial reading program in conjunction with the book drive;
- A math tutorial program at Lincoln School to insure mastery of math facts;
- CARES (Children at Risk, Educational Survival)--a program which matches a business person with an individual child for activities of the mentor's choice during the spring semester;
- Support for a building project at the Mesa Youth Museum;
- Development of a Junior Achievement awareness program;
- Combining efforts with other community committees, associations, and foundations working on similar projects including the Mayor's Committee on Education, Vision Mesa, Mesa Community College, Mesa Education Foundation, and Mesa Education Association;
- Development of Partnership Idea list.

Colleen Thomas and Rick Minne have chaired the Education Committee this year. It has been a very hard working and participatory committee made up of enthusiastic and committed members.

MAYOR'S COMMITTEE FOR EDUCATIONAL EXCELLENCE

COMMITTEE GUIDELINES

Statement of Purpose

The Mayor's Committee for Educational Excellence is a general advisory board to make recommendations to the City on ways to promote cooperative ventures between the various segments of the community concerned with youth and education, and to promote public awareness about the many opportunities for life-long learning for all of Mesa's citizens.

The Mayor's Committee for Educational Excellence has the following responsibilities:

1. To provide leadership in activities that focus attention on the importance of education and on the many educational opportunities in Mesa.
2. To provide a mechanism through which outstanding students, educators, or other community members are recognized for leadership in citizenship education.
3. To act as a liaison to promote relationships between the business and education communities.
4. To promote public awareness about the unique needs of young children and programs available to meet those needs.
5. To promote public awareness about the value of life-long learning for all Mesa citizens.

Committee Structure and Procedures**Membership:**

Members of the Committee are appointed by the Mayor. Suggested appointees shall include, but not be limited to: one or more representatives from Mesa Public Schools, a representative from Mesa Community College, representatives from organizations providing educational opportunities, representatives from the business community, and other interested Mesa citizens. It is suggested that membership be between 10 to 15 people provided there is adequate cross representation from various community groups.

All members must live or work in the City of Mesa. Members are appointed to two-year terms, with re-appointment to additional terms at the Mayor's discretion.

ACTIONS IDENTIFIED AT VISION MESA 1993

CURRICULUM

To achieve world-class status within the element of curriculum the education process needs to:

1. Support relevant innovative programs, don't be afraid to take risks
2. Support vocational and technical education.
3. Participate in an on-going work skill advisory council.
4. Support teacher seminars linked with the business community.
5. Provide citizens performance data relative to world-class benchmarks.
6. Provide citizens information related to performance improvements from the beginning of a school year to the end.
7. Hire, compensate and promote teachers based on their ability to teach effectively.
Retrain teachers that can not teach.
8. Implement effective student-teacher ratio appropriate to subject and age, capabilities and needs.
9. Utilize cooperative methods, strategies and teams in the educational process.
10. Support business and community participation in the classroom.
11. Teach respect for self and others and accepted responsibility.
12. Provide world-class levels of reading, writing, and math for all citizens.

EDUCATION 2020

SUMMARY OF STATEMENTS AGREED UPON MESA SPEAKS 1993

COOPERATIVE EDUCATION SUMMARY:

IMPROVE THE PRODUCTIVITY AND QUALITY IN THE EDUCATIONAL SYSTEM. ACHIEVE WORLD CLASS EDUCATIONAL STATUS BY PROMOTING COOPERATIVE EDUCATION PROCESSES THAT SERVE THE NEEDS OF ALL CITIZENS.

THIS CLUSTERS WITH ECONOMIC DEVELOPMENT EFFORTS TO CREATE PUBLIC/PRIVATE PARTNERSHIPS. TO DEVELOP PLANS TO SUPPORT NEIGHBORHOODS. TO SUPPORT EFFORTS TO BRING SPECIALIZED PROGRAMS TO STUDENTS.

BUSINESS AND EDUCATIONAL PARTNERSHIPS:

DEVELOP PARTNERSHIPS BETWEEN BUSINESS AND OUR SCHOOLS TO IMPROVE THE QUALITY AND RELEVANCY OF EDUCATION IN OUR COMMUNITY.

THIS THEME LINKS WITH EFFORTS TO CREATE INTERACTIVE TELEVISION/COMMUNICATIONS SYSTEMS TIED TO BUSINESSES, COMMUNITY COLLEGES, ASU, GOVT SERVICES, SCHOOLS AND LIBRARIES; WORKS WITH EFFORTS TO CREATE QUALITY CHILD CARE FOR ALL OPPORTUNITIES TEACHING THE WORK ETHIC.



Mesa Foundation for Educational Excellence

Post Office Box 5054 • Mesa, Arizona 85211 • (602) 898 7872

An Overview

The Mesa Foundation for Educational Excellence, a non-profit organization established in 1986, is committed to creating partnerships between the community and its schools.

Its organizers envisioned a cooperative effort that would ensure a high quality education for all students the Mesa Public Schools. The foundation has nourished many programs of the district. Programs receiving support have included Art Masterpiece, the Mesa Learning Readiness Initiative, After-school Enrichment and Parent University. In addition, scholarships have been funded for summer school, and community volunteers have been recognized.

One of the foundation's most exciting ventures is the Mini-Grant program. Mini-grants bring innovative classroom ideas to life. Possibilities for creativity in education are limitless, but financial resources are scarce. Through mini-grants, students have improved their skills and expanded their horizons. Our teachers' imaginations have soared, and our students have been the winners.

While classroom instruction is the core of the educational program, many students need one-on-one assistance not generally available during the school day. The foundation, in an effort to meet this need, will offer a new Tutoring program. This year, the pilot site will serve the students who attend Powell Junior High, the elementary schools feeding Powell, and Westwood and Dobson high. Eventually, this program will provide after school Tutoring Centers at each of the junior highs. Each center will be staffed by a trained coordinator and community volunteers.

Through our Mentor program, students with potential, who are lacking direction, are paired with community role models. Citizens volunteer time to help students develop positive attitudes about life, school and their future. The Mentor program requires little financial support, yet can provide a significant impact for children who need to know we care about them.

Acknowledgement of the importance of the teaching profession is vital to the continued well-being of our schools. The foundation's annual Teacher Recognition Dinner honors faculty members who have reached professional educator status.

The need for the foundation has never been more acute. Mesa Public Schools is the largest district in Arizona. It serves more than 67,000 students, with nearly one-third coming from disadvantaged households. For many of our students, school experiences are central to their growth, development and understanding.

The Mesa Foundation for Educational Excellence will continue to work to bring the community and its schools together. We believe in our children. We believe in our schools. We believe in our community. We have hope for the future.

Schools and community working together

**Education/Business Partnerships
With Mesa Public Schools
(A Partial List)**

Partner	Project
Anzio Landing	Business consultant for Junior Achievement
Apple Computer	Teacher recognition program
Arizona Dept. of Economic Security	Funding for Mesa Youth Placement Service
Arizona Republic & Gazette	Newspapers in Education
Assistance Guild of East Valley	Operation School Bell, clothing for children
Bergeron Engineering	Fabrication assistance for technology projects
Campbell's Soup	School equipment and supplies in exchange for labels
Child Crisis Center	Students donate toys, clothes, diapers, etc.
Cielo Grande Retirement Comm.	Clothing, food for needy students; students provide entertainment for residents
City of Mesa	Police officers for DARE instruction; after-school sports program; recycling and TREES program; book talks; junior high school swimming pools; summer arts camp; MYPS Spelling bee prize, scholarships
Desert Club	DARE t-shirts
East Valley Junior Woman's Club	Pocket dictionaries/thesaurus for classrooms
Franklin Electronic Learning	Students conduct food/clothing drives
Goodwill Industries	Computer hardware and software for technology pilots
Jostens Learning Corp.	Writing contest
Killian Legg	Vision referrals (glasses and exams)
Lions Club	Clothing and food for families
Mahnah Club	Coupons for students
McDonald's	Sci-Tech Saturday, instructors for math classes
McDonnell-Douglas	Grant money/recognition for teachers/mentor program
Mesa Education Foundation	Tutoring program for students
Mesa Schools Supervisors	Private-lesson and music-camp awards
Mesa Symphony Guild	Teacher recognition; Newspapers in Education
Mesa Tribune	Funding for Mesa Youth Placement Service
Mesa United Way	Substitute teachers; Ambassadors — teacher internship
Motorola	Flower specimens for science classes
My Florist	Telecommunications project and cash prize for project
National Geographic	Tickets for student recognition
Phoenix Suns	Coupons for student recognition
Pistol Pete's Pizza	Coupons for student reader recognition
Pizza Hut	Lessons on business world and staying in school
Project Business	Substitute teachers, water conservation lessons
Salt River Project	Students conduct clothing/food drives
Salvation Army	Clothing and food for families
Seroptomist Club	Passes for student recognition
Skateland	Grant money for teachers
Teacher Venture Arizona	Math and science workshop for teachers
TRW Safety Systems	Family Tree Project — preschool, parent education/training
U.S. West	Students/staff conduct blood drives
United Blood Services	Students conduct food drives
United Food Bank	Matching funds for book purchase/student recognition
World Book Encyclopedia	After-school programs
YMCA	

Sci Tech Saturday

A Partnership Model of Business and Education

Sponsored by
Mesa Public Schools
and

McDonnell Douglas Helicopter Company, Mesa

A Report to the Mesa Public Schools Superintendency

What is the Sci Tech Saturday Program?

The Sci Tech Saturday (STS) program is the result of a generous contribution from the McDonnell Douglas Helicopter Company in Mesa. Realizing the need for advanced technological experiences for students preparing to join the work force in the next decade, McDonnell Douglas provided funds to expose children to science, mathematics, and technology experiences in the hopes of instilling an enthusiasm to explore those fields as optional career choices.

Why Sci Tech Saturday?

Rapidly changing technology, shrinking global boundaries, and the common market have created an explosion of intense interest and concern over what is being afforded our students in science and math education. If America is to be competitive, our students must be nurtured and challenged with new approaches to education which will prepare them for global survival. McDonnell Douglas, realizing education and business share similar goals of advancing society through science and mathematics, have provided funding to Mesa Public Schools to provide extended technological and science related experiences to elementary-age children.

Our Goal:

The building of Mesa's and America's future through the education of our children is the prime goal of the Mesa Public Schools. The emphasis of the STS is to enrich and enhance teacher skills, and accelerate student achievement, especially for minorities and females, by actively participating in the program's school-based Sci-Club meetings and the Saturday instructional modules.

The funding support of McDonnell Douglas has opened the doors of opportunity for many students and teachers to explore new and exciting areas of mathematics and science.

What is the Structure of the STS Program?

The STS Project involves two major structural elements:

1. **STS Saturday instructional modules** are taught on Saturdays at schools across the district. Mesa teachers and volunteers from McDonnell Douglas join together to guide students through explorations of numerous science and math areas, such as robotics, geometry, etc. See Appendix A for 1992-1993 Instructional Schedule.

The Saturday modules are structured around a rotation schedule. Each participating school had the choice of one of three options before this year's program was implemented. The school advisors could:

Option One: Select four of seven science instructional modules to visit the school. The Sci-Club also receives \$300 for a funded field trip to a science/mathematics/technology related location.

Option Two: Select five of seven science instructional modules to visit the school. In addition, the school shares \$300 with another school Sci-Club to apply toward a joint field trip.

Option Three: Select six of seven science instructional modules to visit the school. No funding is provided for field trip experiences for club participants.

2. The participating schools each have organized **Sci-Clubs** which meet monthly to enrich and expand students' experiences in the Saturday instructional modules. McDonnell Douglas volunteers take an active role in providing assistance to Mesa educators serving as club advisors.

STS INSTRUCTIONAL MODULES DESCRIPTIONS

Engineering and the Geometry of Structures:

Students will develop an awareness of the importance of geometrical understanding to engineers and scientists as they explore the practices and concepts common to engineers. Students are involved in a variety of learning activities involving manipulatives such as *Lego* mechanics, tower structures, geoboard puzzles, etc.

Physics and Mathematics:

Students are involved in a variety of activities which introduce them to the properties of light and motion. Physics principles are introduced through a variety of scientific investigations including pin hole viewers, light refraction explorations, and several other activities.

Exploration of the Mysteries of Science:

Students explore a variety of scientific investigations developed to help them understand variables and the scientific method. Students participate in a variety of hands-on exercises such as mousetrap race cars, bubble explorations, etc.

Robotics:

This ever-evolving module introduces students to the functions and principles involved in an important scientific area—robotics. Students program simple robots, develop an understanding of circuitry, and create simple powered *Lego/Erector* machinery.

Measuring the Environment:

Using scientific equipment, this unit explores different measuring activities scientists use in the real world. Students measure light candle feet, sound waves, and variance in temperatures, and the affect of UV light on human skin.

The Environment and Science:

A variety of scientific-related activities are developed to explore the environment. This unit, created from the scientific rather than the emotional viewpoint, focuses on scientific exploration of water quality, the greenhouse effect, and many other variables of our environment.

Microchip Technology and Computers:

Specialized *Macintosh* programs have been developed to explore the use of computers in today's society. Students develop an understanding of computer technology as they learn how computers are utilized in the modern world. Manipulating environmental factors in "student-created" ecosystems, and simulated frog dissections are sample activities within this module.

BUSINESS EDUCATION PARTNERSHIP

- ** Business Education Partnerships are joint ventures which should be mutually beneficial.
- ** Schools gain both human and physical resources to enhance programs. They also gain an insight into the needs of business.
- ** Businesses gain insight and input into the school curriculum and operation. In addition schools frequently encourage their clientele to patronize participating businesses.
- ** In our free market society, I see no harm in businesses benefiting from their involvement. Business-education partnerships need not be looked upon as charity.
- ** Examples of business-education partnerships at Rhodes include: (see attached news articles)
 - Miss School-Miss Out attendance program
 - Outdoor Education transportation
 - U.S. West "Choices" program
 - Arizona Bar Association ATLES program
 - Junior Achievement
 - Channel 1
 - Motorola Ambassador
 - Motorola TQI training program
 - etc.
- ** Dream:
 - To have the human resources, technological resources, expertise, and financial support to provide staff opportunities for curriculum enhancement and development. "Time" to create and implement is our greatest inhibitor.

Definition of a Partnership

A general definition for a partnership would be a relationship between two parties that is founded upon mutual cooperation and where each party has certain agreed upon rights and responsibilities.

Brief Description of Two or Three Partnerships Involving Westwood

This is the first year of a partnership between Mesa Public Schools (Westwood High School) and Jostens Learning Corporation. Last year a 10 member faculty study committee put together a recommendation for a "School Within a School" computer-assisted instruction program for dropouts and potential dropouts. We presented the plan to Dr. Zaharis under his "New Initiatives" concept and he entered into a partnership with Jostens to provide us with a computer lab of 32 computers, a printer and all of the appropriate Jostens software programs for high school English, math, science, social studies and creative writing courses. The district provided Westwood with a double wide portable classroom and two fully certified teachers to "run" the program.

Two years ago we were involved in a partnership with Motorola. We were fortunate to have two of our classroom teachers who had been selected Motorola "Ambassadors of Education". Some of the benefits we derived from this partnership with Motorola were as follows:

1. An invitation to several of our classes and special programs to tour a Motorola plant on Saturday mornings and to meet with members of various departments to ask questions, etc.
2. Motorola technicians were sent to Westwood to hook up our Macintosh writing lab to be used by our English Department.
3. Engineers from Motorola were sent to Westwood as guest instructors in many of our math and science classes.
4. Motorola specialists were sent to Westwood to talk to teachers about what skills (especially social interactive and cooperative work skills) were needed by the "new work force" that would be working at Motorola and other "high tech" businesses and industry.

Advantages of These Partnerships

1. Technical expertise
2. Donated and/or loaned hardware

3. Donated and/or loaned software
4. Advantages of research and development
5. "Big name" exposure
6. Allows a school or district to implement a program without having to expend financial resources that most of the time it doesn't have.

Pitfalls of These Types of Partnerships

1. Possible loss of control of the program or project
2. Philosophical differences between the two parties
3. Disagreements over the kind of hardware to "drive" certain software programs
4. Ineffective resource speakers who are not trained teachers and who "put the kids to sleep".

If Westwood could have any partnership it wanted, what would it be?

I'm "thrilled" about our partnership with Jostens that is designed to address our dropout population.

It would be "neat" to be in a partnership with numerous businesses and industries here in Mesa that would be willing to "adopt" "at risk" students and provide them with a part-time job, on-the-job training, and a mentor from the business.

JUNIOR ACHIEVEMENT

Junior Achievement of Central Arizona was founded 30 years ago in 1963. Its mission is "to provide young people with practical economic education programs and experiences in the competitive private enterprise system, through a partnership with the business and education communities." Ten in-school programs are offered. The programs for kindergarten through sixth grade deal with self, family, community, city, region, nation and, finally, the world. "The Economics of Staying in School" is taught in seventh grade. "Project Business" which includes information on America's economic system, as well as on personal and global economics is taught in eighth grade. "Applied Economics" is the program for twelfth grade. This program includes sessions on:

Scarcity	Starting a Business
Supply and Demand	Marketing and Advertising
Ethics	Applying for a Business Loan
Production and Productivity	Retail Industry
A Business Ethics Case Study	Taxes and Tax Form
Three C's of Credit	Countercyclical Policy in Action
U.S. Economy Vs Other Nations	Standards of Living in Less-Developed Countries
Environmental Problems Case Study	

Junior Achievement programs are paid for by donations from businesses and are provided to students at no cost to the school district, the school, or the students. Volunteers serve on the board of directors of Junior Achievement and teach in the classrooms. Teaching students how America works does the following for volunteers:

- ENHANCES team leadership and supervisory potential.
- IMPROVES communication skills.
- DEVELOPS better organizational ability.
- INCREASES coaching talents.
- RAISES level of self-confidence.
- PRESENTS new perspectives on business.
- HELPS them to learn more about their own organizations.
- ADDS to understanding of economics and free enterprise.
- DEVELOPS interpersonal skills.
- ALLOWS the elation of developing people.
- EARNs recognition and a sense of accomplishment.

GET INVOLVED with young people. Become a **PARTNER** with education. Each Junior Achievement class costs \$650. If a large donation is impossible, 13 businesses each donating \$50 can support one class. If teaching every class for several weeks is too much of a time commitment, team with someone else in your company as volunteers. This is perhaps the easiest business/education partnership available to us all.

Ms. ENGLISH. Thank you, very much. Ms. Stephanie Connor, Community Education Specialist, East Valley facility for Motorola. She has worked for 12 years in the human resources for Motorola in the areas of training, recruitment and management. Currently, she's the project management of Motorola School Industry Partnership Programs, with the Chandler, Tempe and Mesa School District. She's working towards obtaining her master's degree in education and is here to tell us about Motorola's partnership with the Mesa school district.

Ms. CONNOR. Thank you for this opportunity this morning to tell you about the importance of business industry partnerships and to share with you their success of the Motorola/Mesa Public Schools Partnership.

Business education partnerships are key to America's success in the 21st century. In order to breach the gap between the rapidly increasing skill requirements of the workplace and the current skill level of students, businesses need to partner with education. Only then will our children be ready for the current technological explosion that will reach far beyond the 21st century.

The problem today is that students, the workforce of tomorrow, are not being adequately prepared to make decisions that will impact the technological world of the future. If business education partnership is a progressive solution that will create long-term results, this union can affect the whole education organization as well as fostering mutual respect between systems.

Because a prepared workforce is critical to Motorola's fulfillment of the vision for the 21st century, we have been a partner with education for some time. In October of 1990, Tim Neese, Motorola's vice-president of East Valley personnel, and Virginia Guy, director of Mesa public school's Career Ladder, started a dialogue that led to a partnership between Arizona's largest private employer, Motorola, and the largest school district recognized, Mesa Public Schools.

Our first activity was to establish goals that would result in the better preparation of students in the world of work. These goals led to our design of a program called the School Industry Ambassador Program, in which educators spend five weeks in a Motorola facility during summer months.

The Ambassadors receive one week of orientation to Motorola's culture, and three weeks of job shadowing, and a week for creating a plan for sharing their experience with their educators throughout their school district.

Their interaction with Motorola employees at a variety of levels, educators are exposed to the jobs and skill requirements of industries. This experience enables them to go back to their classroom and stress workplace skills, such as teamwork, decisionmaking processes, oral and written communication, and the incentive to become lifelong learners.

Educating teachers is like planting a seed, which fosters growth within their students, their colleagues, their district, and their community. At this time, 44 new programs preparing students for the world of work are in place throughout the Mesa Public School district because of the Ambassador program. These programs can

be grouped into three broad categories: training for educators, new education ideas, and changes in current curriculum.

In order to introduce educators and students to quality concepts and continuous improvement, a total quality improvement workshop, called Expedition To Excellence, was developed between Motorola and Mesa schools. Over 600 teachers, administrators, principals and school support personnel have been exposed to key concepts of quality, how to build a culture of teamwork, and a scientific approach to problem-solving.

Motorola has trained eight educators to conduct the Total Quality Improvement Workshop for Mesa school employees. To increase Motorola's knowledge of current practices in education, departments within Motorola's Mesa site have established ongoing relationships with five schools in the district. The employees from these departments are involved with students on a weekly basis. Parents As Teachers as a class, being taught to Motorola employees by an education specialist from the Mesa Public School district. Motorola employees receive Motorola training credit by taking this class, which aids in expanding their parenting skills.

Educators from the Mesa school district have acted as consultants for Motorola's skill enhancement program for its employees. Motorola introduced Earth Generation, an environment education program, to all the middle schools in Mesa school district. This program has activities which enhance the Arizona Department of Education Environment Curriculum.

The programs by the Motorola Mesa Public School Partnership are being expanded to include educators from the Tempe, Chandler, Phoenix Union and Roosevelt school district. There is no question that the results created by this three-year partnership have made permanent and sustainable changes. Over 20,000 students have already been affected. A new relationship between education and business has caused changes in both the business and educational system.

This is true with individual students as well as this partnership. Bringing together education, which is life's training, and work, which is life's career, preparing students for community, which is life.

Thank you.

[The prepared statement of Ms. Connor follows:]


MOTOROLA

October 16, 1993

This Motorola/Mesa Public school partnership has established many new and exciting activities such as the following:

- Educators have written curriculum to incorporate quality strategies in the classroom,
- New programs have been designed for the counseling department at two schools,
- News articles have been published in several periodicals informing the community about the activities of this partnership,
- A staff development program was created for TQI,
- Guidelines were written to help administrators utilize industry volunteers, and Motorola volunteers have become mentors to at risk students.

The major programs of this partnership are the:

Ambassador Program -- is a five week orientation program that places educators in various East Valley facilities during the summer months.

The program consists of three phases:

The *first phase* involves general orientation, introducing teachers to Motorola's goals, philosophy and culture. Ambassadors learn about the manufacturing environment, Motorola's hiring process and current and future skill requirements for entry level positions. In addition, ambassadors receive basic technical training, classes on semiconductor technology and Continuous Improvement Methodology.

During the *second phase*, job shadowing, ambassadors spend time in individual departments, including engineering, wafer fab, information systems, and facilities. During this time, they meet employees at a variety of levels in their assigned department, see firsthand the skill requirements for various jobs, and receive exposure to practical math, science and English.

The *third phase* of the ambassador program revolves around results. During this phase the ambassadors keep daily diaries, hold Friday review sessions, and finally, develop a major summary presentation to Motorola management and school administrators.

Educators from the Tempe, Chandler, Mesa, and Phoenix Union schools have participated in the program. The goal of the ambassador program is that educators and representative of Motorola will work to delineate appropriate outcomes that will enable students to be successful in the world of work. Sixty educators have participated in the three year ambassador program along with thirty-three school administrators.

The ambassadors are given a financial stipend in which half is paid by the school district; at the end of the program ambassadors can apply for a mini grant that can be used

The ambassadors are given a financial stipend in which half is paid by the school district; at the end of the program ambassadors can apply for a mini grant that can be used to finance projects or ideas that directly benefit students or teachers, or to purchase equipment, or to provide field trips.

This program has received two awards for demonstrating sustained success based on planned goals and having a program that is innovative, collaborative and replicable: one from The Arizona Partnership (The School-Industry Ambassador Program), and the other from the State Council of Vocational Education.

To date 77 Mesa educators and administrators have participated in this program. Twenty-four programs had been introduced into the Mesa School district by 1992

Six training for educators programs affected:

235 educators and 4980 students

Ten new educational programs affected:

229 educators and 6845 students

Eight changes to current curriculum programs affected:

196 educators and 4330 students.

Twenty additional programs were introduced in the current 1993 school year.

Total Quality Improvement Workshop--helps educators gain the basic concepts of quality, team building and how to apply these concepts to the school setting.

The program was developed by two first-year Mesa ambassadors and Ralph Quinsey and Stephanie Connor from Motorola. The first year the workshop was introduced into the Mesa school district, participants included:

175 administrators and principals to overview basic quality and a systems view of business and schools

400 school support personnel and administrators to the key concepts of quality

40 participants - five teams, educators and Motorolans introduced to concepts of quality, team building and problem solving tools.

Fifteen school teams in the Mesa school district have participated in the workshop. The quality training is provided by the educators in the school district who helped to develop the workshop. Eight additional educators have been trained.

Educators from the Tempe, Chandler, Mesa and Phoenix Union schools will be trained to deliver this workshop in their school environment in October of 1993.

School/Industry Partnership Program--is an alliance of business employees, education administrators, faculty, and students, for the purpose of enhancing the academic skills and social and career awareness of students. Students gain skills needed for higher education and employment opportunities; and business gains a broader base of skilled prospective employees.

The objectives of partnership participants is to offer K through 12th grade students the needed academic and social services that will enhance their successful completion of each grade with appropriate competencies and establish a desire for lifelong learning by:

- Improving problem-solving and analytical skills
- Improving communication skills
- Enhancing/reinforcing study skills
- Providing in-depth information for better decision making in career choices

The shared knowledge and responsibility gained through Business/Education Partnership Programs will help Motorola to assist in meeting the academic needs of young people and the increasingly rigorous requirements of the work force.

Understanding the role of education in building and maintaining a best-in-class work force compels Motorola to foster strong partnerships between schools. Motorola has seven partnerships that are developing in the East Valley.

Motorola has established school partnerships with five schools in the Mesa Public School district:

Lindbergh Elementary

- Trained students to work sound system for dinner theater
- Twenty students/five teachers attend the Hispanic conference.
- Three principals form Lindbergh sister school in London, England job shadowed at Motorola
- Tours of the Mesa site and Logic manufacturing areas for 5th and 6th grade students and the staff of Lindbergh school.
- Students of Lindbergh have job shadowed Logic employees on a continuing basis.
- Logic division employees planted trees at the Lindbergh school to help with new landscaping

Adams Elementary

- Sixth graders received hands-on activities on rocketry
- Students had Motorola tutors in reading and math

Mesa Junior High school

- Tutors in science
- Motorola employee created 12 additional science kits

Westwood High School

- Motorola employees presented at a Career Fair
- Presentations were given to Life Skills classes
- Motorola engineers and students installed computers for the English department
- Hearing impaired students spend time at a Motorola site

Lincoln Elementary

- Motorola employees interpret for Hispanic parents at Parent/teacher conferences
- Motorola employees participate in after school programs
- Motorola provides computer training for teachers

Youth Enrichment in Semiconductors--is a two hour tour with structured activities for children in Kindergarten through 12th grades, who are immediate family members of Motorola employees.

The **Youth Enrichment in Semiconductor** tours have been conducted monthly for employees and their school aged children. Each two hour tour has structured activities that allow the children to experience the workplace with their parents. This program increases the child's awareness of the business environment.

A brief overview of Motorola, the manufacturing process and an introduction to terminology is given to the children. They see a video of their parent in the clean room doing their job and welcoming them to Motorola. Each child has an opportunity to visit the gowning room and try on a miniature clean room suit. Visits are made to the department's training center where children participate in hands-on learning, and have a chance to hold and touch actual products such as pagers and cellular phones. There is also a scientific demonstration using liquid nitrogen.

Each tour ends with parent and child enjoying a meal in the Motorola cafeteria. The take home memorabilia includes an educational coloring book depicting the making of a semiconductor or a department orientation manual. The children are also given a poster showing Motorola's history and a framed picture of them in a clean room suit.

YES, started as a program in one organization at the Motorola Mesa site, which has conducted 14 tours and allowed 140 children of the department's employees and their caretakers to participate. Seven other organizations within Motorola have or are at the present implementing a Youth Enrichment to Semiconductor program.

This program has recently broadened its horizons and has expanded into the public schools. Students have an opportunity to do the same activities as those children who visit the facility. A video showing the making of a semiconductor gives them an idea of the manufacturing process. Motorola presenters stress the value of education both in the work place and as a life-long process. Motorola's 40 hour training policy is explained. YES has been presented to Mariposa elementary school in the Tempe school district and is scheduled for Mesa high this month. The YES program will go to Robson elementary school in February of 1994.

Parents As Teachers -- is based on the philosophy that parents are their child's first and most influential teacher and that learning begins at birth. Studies show that youngsters, birth to three years learn more and at a much faster pace than they ever will again.

The curriculum was created by Missouri's State Department of Education. It has received national recognition as an outstanding early learning program and is offered in 40 states. Motorola and Mesa Schools are the first entities to bring PAT to Arizona. Parents As Teachers is taught by certified parent educators from the Mesa School district.

Parent Educators make monthly home visits formatted in a nine month structure. Motorola employees meet as a group at the work site four times a year with classes designed for parent's interests and needs. PAT provides information on child development and effective child-rearing techniques. Language development, thinking skills, curiosity, and social skills are emphasized at each stage of growth.

This program is available to all East Valley Motorola employees with children born after January, 1991. Parents As Teachers takes the family through the beginning of the child's growth until age 3. Motorola has 46 employees from all three shifts enrolled in the program along with their 68 children. These employees receive Motorola training credit for participating in this training.

Earth Generation -- is an environmental education program for middle school students. Motorola gave this program to all the middle schools (7th grade) located near our business sites. The Earth Generation kit contains lessons on air, water, land and the ecosystem. A poster of the Earth Generation logo is provided for the classroom.

There is also included a teachers instruction manual along with written activities for the students. As part of the lessons there is a pre and post assessment completed by the students. There is also an 800 phone number for teachers to call if they have questions on how to set up the lessons for their students. Motorola Environmental Engineers will be providing technical assistance to the program.

The target users of the kit will be middle school science teachers. The Earth Generation kit has been successfully used with seventh, eighth and ninth graders who were sponsored by a partnerships between the Dow Chemical Company, The Michigan Audubon Society and the U.S. EPA and also a partnership between the Niagara Mohawk Power Corporation, the Audubon Society of New York, and the U.S. EPA. This educational program was designed with the state of Arizona's environmental curriculum as a guide.

The program was introduced to the school districts at a breakfast meeting with the administrators of the Mesa, Chandler and Tempe. The first week of August was the roll out into the schools. This program was introduced to 88 teachers in the East Valley which will effect 384 classes of students.

For more information regarding this partnership contact :

Stephanie Connor, Community Education Specialist
Motorola Semiconductor Products Sector
2200 West Broadway Road (M375)
Mesa, AZ 85202

or

Virginia Guy, Director of Mesa Public school Career Ladder
Mesa Public Schools
Administration Center
549 North Stapley Drive
Mesa, AZ 85203

Ms. ENGLISH. Thank you, very much. Our fourth speaker is Ms. Virginia Guy. Ms. Guy is a Career Ladder Specialist, Mesa Public Schools. She has been a teacher for 20 years with the Mesa Public School system. For six years she has been the director of the Career Ladder program, which is a competency-based professional development program for teachers. She's an active member and former vice president of the Arizona Education Association. Please give us your testimony.

Ms. GUY. Thank you. Thank you for having us here. From the educational perspective, the same goals and objectives were present in this partnership. The impetus for the first meeting between Tim Neese and myself was for me, as part of my responsibility as the director of the Mesa public schools Career Ladder Program, to search for a way to use the expertise industry to help educators understand how to implement some form of sigma or zero defect in the area of student achievement.

I knew that Tim Neese was interested in working with the schools to help improve the quality of the education our students were getting. As we dialogued, the Motorola people expressed their frustration with the products of our school system, our students. And I had to express the frustration of the educators who work from the perspective of my 20 years of experience working as hard and as intelligently as they possible could, and yet we were obviously not serving our customers in a manner that was meeting their expectations and fulfilling their needs.

During these discussions the light bulbs went off for all of us; that although teachers were doing a very fine job of teaching what we thought students should learn in a way we thought was useful for them, most of us had never experienced the world of work outside the educational setting. Most teachers choose the field of education early in life and have spent their entire lives in a school setting. Few of us have had any experience in the world of business, let alone the highly technical world of a high-tech industry.

Until the last decade when the explosion of technology demanded it, schools and school curriculums have changed very little. Both parents and educators were most comfortable with the tried and true familiar educational pattern. Change is difficult. There was little opportunity to really know and understand the challenges that were occurring for us out there in the real world.

School budgets did not allow for professional development that prepared us for this rapidly changing world. We certainly did not have the technology within the school setting for developing the expertise needed, much less in order to teach it to our students. So we tended to cling to the way things had always been done.

We put together some of our best people and came up with the idea of a partnership that would solve concerns on both sides of the table. This partnership would surely partner educators with the very people who are in the trenches, making it happen in industry. We determined that we needed not only high school science and math teachers involved with engineers and high-level technicians, as many school-industries partnerships do, but we needed the whole spectrum of educators involved from kindergarten through high school, counsel and curriculum specialists.

We wanted them to experience work across the spectrum of Motorola employees, including production, maintenance, secretarial, technical, all the members of the team. The goal of this partnership was for educators to experience the world of work in this fascinating technological giant in our own community, to discover those skills, attitudes, and methods of work that students would really need to be successful, and then to come back to the Mesa Public Schools and begin to adapt and integrate their experience into their own teaching, as well as to share that experience and knowledge with their colleagues, and to impact the curriculum where necessary.

The focus of this partnership was always to improve student achievement. The result of this partnership was overwhelming in reaching that goal. It has greatly exceeded our goals and expectations in many ways.

Stephanie has given you many examples of continued partnerships, volunteerism in exchange of expertise. The articulated appreciation for the teaching profession on the part of the professionals at Motorola has been extremely esteeming for our educators. The value of the understanding that has developed on both sides of the fence is beyond a dollar value.

As teachers have come back to apply the learning that they have experienced, Motorolans have been there to assist, to provide needed support, define materials and information, to come into classrooms and to volunteer. Motorola has seen that educators have great expertise that they can access. As Stephanie told you, Mesa educators have gone to Motorola and offered their expertise to assist Motorola in solving a variety of educational needs. They've provided parenting skills to help Motorolans understand how to help their own children. They've assisted Motorolans as they've reached out to other communities of Chandler, Tempe, and Phoenix, to involve educators in these communities in this exciting partnership.

I believe that the long-term dynamic success of this school-business partnership lies in the fact that it is a true partnership. It has all of the elements of give and take that any successful partnership must have. We came together out of sincere expressed needs, and articulated them as professionals. We analyzed those needs and made a commitment to work together to solve the problems each of us was experiencing.

Never has Motorola simply come in and attempted to tell us, as educators, what we needed to do. They've worked with us and given us opportunities to better educate our students to become the kind of workers and thinkers that industry needs. They've valued our expertise and appreciated our concerns, and we have valued their expertise and the opportunity to experience the real world and to adapt and integrate it into the experiences of our students.

Successful partnerships do not just happen. They take time and planning. They take money and commitment. They take communication and perseverance. Because of the Arizona Career Ladder Program, in which the Mesa Public Schools participate, the school system was able to work with Motorola to provide adequate funding for the program, as well as support, in terms of time and effort required to make it truly successful. Motorola has gone above and beyond anything we could have dreamed, in terms of their commit-

ment, patience, time, and caring for the students of the communities they serve.

Business partnerships such as this which are dedicated to the improvement of our school systems are indeed critical to the success and the future of this country. Through this avenue, businesses not only give their dollars and themselves, but they make tax dollars spent on education ever so much more of an investment in the future of your children, as they work with educators to truly make a difference in the quality of learning that occurs in our schools.

Thank you.

Ms. ENGLISH. Thank you, very much. Would you like to start out with questions.

Mrs. UNSOELD. I think I have a single theme that I'm going to emphasize, however. And you all come to this topic from a different perspective than the first panel. But I'd like to ask you the same question: What, in your experience or your observation, are some of the duplication of requirements, or the other strings that get in the way of a more effective type of partnership? Do you have any suggestions for slashing these away?

Ms. THOMAS. I'm not sure I really understand what—

Mrs. UNSOELD. Well—

Ms. THOMAS. Because are you dealing with funding at this point?

Mrs. UNSOELD. Not necessarily.

Ms. THOMAS. Okay.

Mrs. UNSOELD. Or regulatory restrictions. I know that often, for example, I have observed in my State that when the public is unhappy over the way something is happening, they want more accountability. So legislative bodies start putting out more forms to fill out and create more bureaucratic requirements. And we never go back and start thinning those out. And as we heard from the first panel, sometimes when you are trying to put together small grant moneys to do something bigger, you can't—you're not supposed to use money out of this pot to do this, and so on—what are some of the things that you feel are real impediments to business education partnership?

Ms. TOLMAN. I guess one of the hardest things, and people that are involved in nonprofit organizations I'm sure will jump up and agree with me, is funding for operational costs.

And it seems to me that if there were a way for those costs to be funded, I think that service agencies around this country would feel a rebirth and would actually start to develop a lot of the programs that we all have in our file drawers that we simply do not have time to find money for.

It's a trust issue. I think that if a nonprofit organization has been around for a while and is physically sound, and has provided wonderful programs to its community, to have that stamp of approval of saying, "Here's some funding. Keep doing what you're doing," would be extremely beneficial.

The other thing is, in dealing with one of the agencies in Washington this past fall, as fiscal agent on a grant for the district, I've made several calls back there. And one day I think I visited every department in this agency. And when I finally got to the last person and got the person I needed, he wasn't there. And so I kind

of giggled and I think I put his secretary off a little bit, and I said, "I think I've had the phone tour of your foundation today."

And then subsequent calls to this man, he was never there. I finally said, "Does he work part time?" Finally, when I got to him, he had been reassigned and I was with someone else. And literally, I probably spent \$20 of nonprofit precious money in long-distance calls to this agency.

So I think that—I think if those agencies could take the task of business, you know, this is what you do and this is how you perform, and we're going to go forward, we all would be better served. Now I'm going to get off my soapbox.

Ms. THOMAS. You gave her a great opportunity.

Mrs. UNSOELD. I did. I invited it.

Ms. THOMAS. I can't really think of what the Federal Government can do, but one of the issues that constantly arises with the Chamber and with businesses in the community is, yes, it's okay, Motorola can do this because they're large. What can the small businessperson do? The person that can afford one employee, you know.

And I don't—I'm not sure that's an issue that the government can address. It has to be a communication issue, which is one of the things the Chamber is working on; i.e. a small business, for example, can give their employees release time to go to teacher conferences. They just don't think about it.

So maybe the idea that partnerships are not just big money or big corporations, but they're genuinely partnerships that are very individual.

And that doesn't answer your question, because you can't solve that.

Mrs. UNSOELD. I think it's a good idea.

Ms. THOMAS. But I think we need to think smaller maybe.

Ms. GUY. In any way that education funding to the States can be facilitated, clearly that will help us in the venture in which we find ourselves. The funding for the program that supports this partnership is very much in jeopardy at this point in this State. And so we're scrambling right around to find out how we do not allow the successful program to go away, in the event that that should occur.

So we are all very cognizant of the smaller dollars for education. But those dollars that go to support teachers to become able to deal with the changes that are occurring in the world, the technological changes, those are the dollars that States squeeze first because indeed they have to.

So whatever can be done to support that kind of support of the teaching profession would be greatly helpful.

Mrs. UNSOELD. I think one thing that I didn't respond to is—you answered it, but I think it is important for us to establish, and that was the trust issue. We've put people in these places, we've got to give them a little trust so they've got the opportunity to go ahead and do it. There probably will be mistakes, but we should back them up too. Thanks.

Ms. ENGLISH. I have two questions. One of them was prompted by your comment about the small businesses. This hearing isn't for District 6 alone, but certainly a lot of congressional District 6, in

fact, the majority of the economy, is based on small business. I've heard this same complaint from a variety of small businesses. They want to get involved, but they feel they have such a small contribution that they think it's meaningless. I think one of the positions or roles Chambers might be able to take is to act as a catalyst for partnerships in small businesses, to put together a venture of some kind, and develop that opportunity for small businesses.

Do you think something like this would work? Do you think Chambers' could assist that?

Ms. THOMAS. Yes, indeed. And in fact our Chamber is and has been. I was chairman of the Education Committee last year of the Chamber, and this is one of the issues that we've dealt with.

It's really a matter—I hate to say the word again—of education. But it is definitely a job that the Chamber can do and in this community is beginning to do. And I think in a lot of them. Because people just—they need to be told. They need to have suggestions. And there's no question that is one of the answers. Of course small business is in jeopardy in a lot of different situations, so I think the small business definitely has to be addressed, and I think it's a good idea.

Ms. ENGLISH. I have a question for all of you now. This has to do with the role of parents. I believe that we're coming up with some great ideas, but that we've left out this little piece of the puzzle. We have to be educating parents about how good these ideas are. If I weren't sitting on this panel today, or hadn't been involved with education in the last six years in the legislature, I wouldn't even be aware of some of these outstanding ideas.

Do you have a recommendation on how we might elevate the role of parents, or involve them in the educational opportunities for their children, and even participate themselves? Any comments from any of you on that? How do we trigger a parental involvement?

Ms. CONNOR. Well, one thing that we've done at Motorola, with Mesa Public Schools, is to offer parenting classes to our employees who are parents, so that they can see the role that they can play in aiding their children through the education system. We have two programs that we offer at Motorola. One is the Parents As Teachers program, and that is for parents who have children that are newborn to age three, so that they can learn at an early age things that they can do to stimulate education for their children.

We also have another program that we offer for parents too, and that's parents of—that have children of any age, to show them how they can assist their children with the education system.

And an incentive for our employees to take that class is that they do get Motorola training credit for those classes that they do take regarding parenting.

We're also working on a project with Mesa Public Schools with a booklet for employees and for Mesa Public Schools' employees that gives parents ideas on activities and different things that they can do with their children from newborn to age six so that children can be prepared when they start the school system.

Ms. GUY. Through the school system—through the Career Ladder program, as a matter of fact, many of our extended opportunities for teachers for which they receive additional moneys, are op-

portunities to work with parents in just that way and to actually do science workshops. We do an at-risk program in the summer with our students from at-risk circumstances, which has a very strong component of parental learning in terms of coming in for science and math workshops with their children. Family math opportunities and science math opportunities are part of that program. So we are indeed working with parents in that way.

Ms. THOMAS. I think Mesa is probably very lucky in that we have been addressing this issue for a long time. And the Mesa Public Schools have had what's called Parent University for a number of years. It's outstanding. This year the Chamber—or last year the Chamber advertised this to all of our members. As I said, we have 1,400, that filters down. Most of the problem is that parents, for some reason, are put off and sometimes frightened to interact with the educational system.

And try as you might as an educator, as an employer, whatever it is, sometimes it just doesn't happen. But there are a lot of those programs out there that are being developed. And as you remember, in the end of my statement, we can fund everything, we can partner, but the bottom line happens with the student and with the family. And unfortunately, individually we may not be able to impact that, but I think educationally we can.

Ms. TOLMAN. This may be another soapbox, I'll try and contain myself.

Ms. ENGLISH. This is your great opportunity though.

Ms. TOLMAN. I think one of the most important things that schools can do is to treat those parents as customers. If you walk through the door of any kind of a business and you are unhappy, everybody would fall all over themselves to help you and treat you kindly. It doesn't happen very often in this school system, but every once in a while you go into an office and stand at the desk, and activity goes on, and you're not recognized as a parent or a client. And I really think that if administrators could get that in their minds, that these are our customers, these are the people that we're here to please, they could really empower some of those parents.

I'm a very strong-willed person, and so I'm not going to back down very easily, but there are a lot of folks out there who are not and who are extremely frightened. The administrators of this district are wonderful, and they do their very best to serve a huge population. I think educators are the most overworked group of people in our country.

And the other issue that goes along with this is I would love to see some wonderful communication from the newspapers around the country, because communicating with parents is absolutely the most difficult thing in a school system. We have 67,000 students in this district, and to get information out to those parents is mind boggling, to say the least. If newspapers would, first of all, report some of the positive things that are going on in education, that would be extremely helpful. And then if they were willing to donate some of their space, "Hey folks, this is what's happening in your schools, get in there and see your principal, help your child."

And then it comes down to just the individualized issue of parent and teacher and training those teachers to treat those parents with

the utmost respect. Because whether that parent is right or wrong, their child's best interest is at heart and they need to feel that that's important.

Ms. ENGLISH. Could I—

Mrs. UNSOELD. This has just been a very, very interesting panel. You have probably been selected because of the reputations you've established, because you're doing something. But how does that spark first get lit? What about the communities where there is no flame yet kindled? Do you have any suggestions on this? Does it just have to be the right chemistry?

Ms. GUY. Just let us go, light them up. We'll do it.

Mrs. UNSOELD. And I wanted to say to you, I think you're absolutely right about getting more news coverage. The newspaper in my district, in the town where we had our educational hearing, has a policy that they will not cover anything after 4 p.m. or on week-ends. But I tried to trick them by getting the publisher on one of the panels, and he sat through it all Saturday afternoon, and I'm hoping it's going to change the way they cover educational issues. I'm just laying that out as something you might consider.

Ms. TOLMAN. I just have one comment on lighting a spark. I think that for a lot of people if you have it, it's as simple as this, if you go to a high school and you have a winning football team, what happens to the kids at that high school? They become very excited, very involved, very positive. So I think that happens in schools. If we hear about the positive things that are happening, we can invite parents to be a part of that.

The perfect example, we opened a brand-new elementary school in this district this year, and my children attend that school. Well, just like anything else a new school brings lots of excitement. Open house was absolutely packed, it was standing room only. And the principal at that school, who's been an administrator in this district for years said, I have never ever seen this kind of a turnout.

And so with that regeneration we can really affect something positively. So I think it's that, if school districts look at what they have and make that positive, rather than we need more funding, we need this, we need that, and the Mesa District does an excellent job of that, they really do.

Mrs. UNSOELD. More power to all of you.

Ms. ENGLISH. Thank you. Excellent dialogue. I very much appreciate all of your comments. If you think about some of the discussion that took place and you come up with other creative ideas, we would love to have that as part of our record to take back to our colleagues. If something else comes up the next couple of days, please let my office know, and we'll get it into the record. Thanks very much.

We're going to take a few minute break here before we start with panel number 3.

[Recess]

Ms. ENGLISH. We'll bring the meeting back to order. Our third panel today is Mr. Don Reck, Ms. Diane Jezek Powell, Mr. Frank Edwards and Ms. Barbara Buckles.

We'll start out with, if you're all ready again, with Mr. Don Reck, Director of Public Affairs, Scottsdale Chamber of Commerce. He has worked with the IBM Corporation for 29 years, and he is a

former chairman of the Arizona Chamber of Commerce. He is also a former president of the Arizonans for Cultural Development and the Tucson Museum of Art. He has been active in numerous civic and public service organizations and he is a former editor of the Chicago Daily News, we got our press person here.

Mr. RECK. That was a long time ago.

Ms. ENGLISH. Oh, darn.

STATEMENTS OF DONALD RECK, DIRECTOR OF PUBLIC AFFAIRS, SCOTTSDALE CHAMBER OF COMMERCE; DIANE JEZEK POWELL, PRESIDENT, SCOTTSDALE UNIFIED SCHOOL DISTRICT GOVERNING BOARD; FRANK EDWARDS, DIRECTOR OF EXECUTIVE DEVELOPMENT AND EDUCATION, DIAL CORPORATION; AND BARBARA BUCKLES, COUNSELOR, CAREER CENTER, SAGUARO HIGH SCHOOL

Mr. RECK. Thank you, Congresswoman English and Congresswoman Unsoeld. Thank you for inviting us here today.

I'm here to speak on behalf of the Scottsdale Chamber, as well as a project that is national in scope in which we here in Scottsdale, at the Chamber, have taken a leadership role to implement it, not just in Arizona, but hopefully across the country. It is called the Community Learning and Information Network. It's a national initiative that I think will address a lot of the comments you heard here today about pulling funding together, being a catalyst for partnerships, being a catalyst for change in the educational system.

It speaks to the many imperatives that we're all familiar with, and I won't dwell on it, about the need for change and the need for competitiveness in our schools and in our industry. Simply put, the goal of the Community Learning and Information Network is to bring technology to the classroom, learning through technology to the classroom. The goal: establish 1,000 community-based learning centers by 1996, and 100,000-plus in 16,000 U.S. communities by year 2005.

It will link existing and planned telecommunications networks in cooperation with States, the National Guard, K-12 schools, universities, community colleges, health-care providers and the private business sector. It, indeed, it's the on-ramp to the future of technology, providing what we've read just this week in reference to the proposed merger of two major corporations. It will provide the digital video voice highway between classrooms, between business, and it will provide anytime, anywhere access ultimately from the classroom to the home and to the workplace.

This idea was conceived some four years ago with the U.S. Chamber of Commerce, the U.S. Army, and others, and they agreed and hit upon an organization called the Community Learning Information Network and established a nonprofit entity in Washington. In that time it has dealt with the Department of Defense and its agency, called ARPA, Advanced Research Projects Agency. And it has, this summer, this past summer, at the behest of ARPA, it submitted a proposal with pilot recommendations from 16 States and the District of Columbia. Arizona is one of those States and Congresswoman Unsoeld, I believe Washington and Oregon are also.

The funding would come from what is called the Federal Technology Reinvestment Project. It will be a combined effort from the Departments of Defense, Energy, Commerce, National Science Foundation, NASA, and others. They will pool their moneys in what is called the, as I said, the Technology Reinvestment Project, where dollars previously spent on defense efforts will be pooled and try, in an effort to bring restabilization to that industry, and at the same time bring the technology that has been developed in that industry, to the commercial marketplace.

It will provide the seed funding with matching dollars for technology investments in schools and in the community. It will lead to shared usage fees that will be paid by business and communities, reaching into both small and major businesses with distance learning and job training. It will also provide development and license fees as it becomes a technology platform for testing and experimenting with those learning technologies that need to be developed for these future highways that we all talk about. And ultimately these dollars will be reinvested as the Federal dollars are disappearing and we find that this is a self-sustained entity, paid through user fees and community participation.

This is a partnership-driven program at the national and at the local level. At the national level, beginning with the U.S. Chamber, there are private, nonprofit and Federal Government partners. I won't list all of them for you, you have a copy of it, but needless to say they are an impressive array of private industry and nonprofit organizations, from the universities to the foundation organizations.

Let me speak on how that translates at the local level. In Arizona we have put together a pilot project that will work with the Department of Youth Treatment and Rehabilitation, a State agency that runs the rehabilitation institutions for juvenile offenders. Working with the Maricopa Community College District, we will provide, through distance learning by either fiber optics or hardwire—whatever exists, we're not going to try to reinvent the wheel—we will provide distance learning to enable those students to qualify for a GED equivalency or to take vocational training that could translate to them going on into the community college system.

In our second phase we will launch a program with the Arizona National Guard in conjunction with its Challenge Program, which is also federally funded, where it is directed at troubled youths, both those youths who have yet to reach the, the fortunate few, yet to reach the Department of Youth Treatment and hopefully they will be forestalled from doing so. We'll also partner with the Arizona—University of Arizona Health Science Center to help establish some of the foundations for a statewide tele-medicine network reaching into rural Arizona. And we will expand through the K-12 school districts creating these community learning centers.

The CLIN Arizona entity, like the other affiliates in the other 16 States, 15 States, will be established as nonprofit organizations. They will be contracting entities responsible for the Federal funds, they will market the excess learning, and they will help Arizona Partners become successful in these operations.

Our initial goals are to achieve success with the Department of Youth Treatment pilot project, and then by 1996 hopefully establish a minimum of 20 community-based learning centers in the State. These centers will become a center of confidence for CLIN as we develop the new learning technologies, taking those technologies that already exist at the Federal levels that are sitting idle, unused and need to be transferred now to the public sector and the private sector for their more effective use.

We need to become a development center for the courseware that's going to be needed and necessary for this future highway that we call the information highway. We hope to establish, around the State, on these community-based learning centers, a partnership that will consist of school districts, city and county governments, community colleges and universities, the Chamber of Commerce and the business community, the National Guard, health-care providers, and wherever appropriate, a business incubator. We have the foundations for that beginning in Scottsdale, and we believe that can be easily replicated throughout the State, and we find great interest as we talk to those who see the opportunity that this will provide.

The technology will be open to all. It will be vendor neutral, and it will be a test bed for the future technologies, and indeed it will create the ability to bring together the knowledge, the technology, and the creativity that's going to be required for the courseware development of the future, both at the instructional level through multi-media conferencing, simulation, which exists in quantity at the Federal levels and which we believe is the new future wave of learning.

I'll conclude with that, and I ask that we—Congresswoman English is—we've already received your support, and we appreciate that highly. This proposal was submitted at the national level. It is now being considered as part of the National TRP program, and those fundings, that those funds, we understand, will be announced sometime in November, and we're hopeful of at least receiving some of the partial moneys that we think can be applied for this future technology. Thank you.

[The prepared statement of Mr. Reck follows:]

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October 1, 1993

Dear:



The Education Committee of the Scottsdale Chamber of Commerce is expanding its long-term partnership with the Scottsdale Public Schools. As an outgrowth of our successful Principal-for-a-Day, we are initiating a partnership program with the Middle Schools called "Preparing Students for the Workplace" and we need your participation. We believe we can forge a successful program that will assist teachers and students in better understanding the relationship of school work to real life work.

The partnership will begin with three significant efforts which were identified as prioritized needs by the middle schools principals:

- o Teachers will shadow business people in the workplace
- o Individuals from the workplace will counsel students on skills they need for the future workplace
- o Businesses will provide opportunities for teachers to do on-site summer internships

The shadowing program, to be scheduled on a day mutually convenient to the teacher and the business, will enable teachers to gain a better understanding of the business world and the skills students need to successfully compete in the job market. We will need multi-disciplined businesses to participate so teachers can be exposed to the many skills applied in the business world. Examples: Total Quality Management in action, introductions to critical business areas, and application of business leadership.

The second component is to have individuals from business counsel students about the skills needed to be successful in the future workplace and also discuss how the curriculum relates to the world of work. This individual might want to work on a specific project with a class that demonstrates relevancy of education to the workplace.

The third component is summer internships for teachers, in a variety of settings, providing teachers real-world business experiences with hands-on opportunities.

The kick-off for this program will be Thursday, November 18. Barbara Clark, Manager of External Education for Motorola, will be the keynote speaker. Her talk will address a national Report for America 2000, "What Work Requires of Schools".

We are hopeful that you and your business will choose to be a partner in this exciting new program. There is also an opportunity with the enclosed card to indicate other ways you may wish to support our schools. It includes additional needs identified by the middle school principals. Please indicate on this card your participation in the partnership program, "Preparing Students for the Workplace".

Thank you for helping provide our children greater opportunity to succeed.

Sincerely,

Mayor Herb Drinkwater
City of Scottsdale

Don Carson, President
Scottsdale Chamber of Commerce

Dr. Duane K. Sheldon, Ph.D.
Superintendent
Scottsdale Public Schools

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SCOTTSDALE CHAMBER OF COMMERCE

7545 Scottsdale Mall • Scottsdale, Arizona 85251 • 408 • (602) 945-8481 • 1-800-877-1117 • FAX (602) 947-4523

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SCOTTSDALE PUBLIC SCHOOLS

EDUCATION CENTER
3811 North 44th Street
Phoenix, Arizona 85018

Post Office Box #15428
Phoenix, Arizona 85060
Telephone: (602) 952-6100
FAX: (602) 840-4307

October 16, 1993

To Mr. Dale E. Kildee, Chairman
Subcommittee on Elementary, Secondary and Vocational Education
U. S. House Committee on Education and Labor

Dear Mr. Kildee and Members of the Committee:

We are deeply honored that you have selected Scottsdale School District to present to you today regarding partnerships in education.

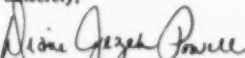
We have initiated several partnerships in the Scottsdale School District. Believing in the African proverb, "That it takes an entire village to educate a single child," we state that education is the shared responsibility of the student, home, school, and community. This opens the doors of our schools to those who want to become part of the educational process.

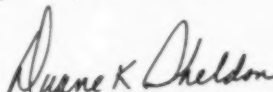
Enclosed is a list of some of the partnerships between the school district and the community. The foundation for many of these partnerships has come from our relationship with the Scottsdale Chamber of Commerce.

The success of our partnerships has been built on the ability to create a relationship where the needs of a school are matched with the needs and resources of a business. A Program Design is made that identifies the goals and objectives of the partnership, the responsibility of the business and the school and a plan for monitoring and evaluating the development of the partnership.

Thank you for inviting us today. We appreciate the opportunity to tell you what is happening with business and school partnerships in the Scottsdale School District.

Sincerely,


Diane Jezek-Powell
President, Governing Board


Duane K. Sheldon, Ph.D.
Superintendent

SCOTTSDALE SCHOOLS: Educating Tomorrow's Leaders Today

EXAMPLES OF SCOTTSDALE SCHOOLS BUSINESS PARTNERSHIPS

The following are a few of the partnerships in place in the Scottsdale District:

• GREYHOUND DIAL CORPORATION

Greyhound Dial has provided the salary for the College and Career Room Director at Saguaro High School for the past two years and funding for materials. They also provided funding to remodel an existing room for the center. It is now a model for the community and state. When students enter the room they leave the high school environment and step into a "Corporate America" setting.

• DISCOVER FINANCIAL SERVICES CARD

Discover Financial Services Card hired Coronado students as part-time employees this past summer. The program was so successful that Discover is meeting with the students individually to discuss their employment with the Company and to offer them part-time positions through the school year. Discover Financial Services Card looks forward to continuing their association with Coronado High School by offering more students the opportunity to work with them. This work experience offers students not only income but the advantages of on-the-job training and experience plus contact with working employees of all ages. Terry Stewart, General Manager looks forward to a continued partnership with Coronado High School and has congratulated the business teachers on the caliber of students which were sent to Discover Financial Services Card.

• SALT RIVER PROJECT

Salt River provided the salary for the College and Career Room Director at Coronado High School for the 1989-1990 and 1991-1992 school years. They have also provided speakers for Continuing Education Evening.

• SECURITY PACIFIC BANK • VALLEY NATIONAL BANK

Employees of Security Pacific Bank and Valley National Bank have volunteered their spare time to convert the records of Arcadia High School's library resources from a card catalogue to the computerized library system. The volunteers are working after school and on weekends. Without these volunteers, given limited school funds, this conversion would have taken between two and three years. With the help of volunteers the conversion was completed in eight months.

• HONEYWELL • McDONNELL DOUGLAS

Employees of Honeywell and McDonnell Douglas have volunteered to tutor Arcadia High School students on Saturday mornings. The program they are working with is called Generating Academic Potential (GAP) which began last year in response to the "no pass, no play" rule. This year the program is open to all students who feel they need help in any of their classes.

• GATEWAY COMMUNITY COLLEGE

Nancy Seifer, Director of Gateway Community College Learning Center trained volunteers for the GAP tutoring program at Arcadia High School. She also is going to teach a study skills class on the Arcadia campus second semester.

Page Two
Business Partnerships

- **BRANDEIS UNIVERSITY**
- **AMERICAN ASSOCIATION OF UNIVERSITY WOMEN**

Brandeis University Alumni and A.A.U.W. have recruited volunteers to tutor in the English As A Second Language Program (ESL) at Mohave Middle School.

- **NORWEST BANK**

Norwest Bank has provided a scholarship fund for athletes who cannot afford the athletic transportation fee.

- **NORWEST BANK**
 - **SCOTTSDALE BOYS CLUB**
 - **SCOTTSDALE GIRLS CLUB**
 - **SCOTTSDALE PREVENTION INSTITUTE**
 - **WENDY CENTER**

Norwest Bank has provided funds for after school activity buses at Mohave Middle School and Supai Middle School. This has allowed students to remain on campus after school and participate in after school clubs. Fifty percent of the students participating in the clubs are "at risk" and have been encouraged by teachers to be involved in these activities. Scottsdale Boys Club, Scottsdale Girls Club, Scottsdale Prevention Center, and Wendy Center are providing staff to sponsor the clubs.

- **EMBASSY SUITE HOTEL**

Embassy Suite has provided facilities for the Coronado Parent Group and teachers do have a goal setting retreat.

- **ROBINSONS/PHELPS DODGE**

Funding is provided for tutor training. The School District provides a trainer. We have 120 inter-generational tutors active at seven schools.

- **MOTOROLA**

Motorola employees came twice weekly to assist students at-risk of failing.

- **SCOTTSDALE CHAMBER OF COMMERCE**

"Preparing Students for the Workplace" is a partnership between the middle schools and selected businesses.

"Principal for a Day" pairs members of the Scottsdale Chamber with Principals for an in depth look at the schools.

AWARDS & HONORS



Points of Pride

For the second year in a row, the Scottsdale School District has been ranked the #1 school district in the Southwestern United States by *Expansion Management Magazine* (10/92 and 10/93).

The Scottsdale community approved both a Bond Election (\$89.9 million) and Override Renewal (\$6.5 million) in May of 1993. With the passage of these ballot questions, the Scottsdale community has supported three bond elections totaling \$226 million and three overrides totaling \$17 million since 1986. The Scottsdale resident's schooltax rate, however, remains one of the lowest in the state.

The Scottsdale School District hosted a national conference on curriculum integration, "What's All This Talk about Curriculum Integration?" Featured speakers included Howard Gardner (Harvard University), James Beane (National-Louis University in Madison, Wis.) and Susan Kovalik (President of Susan Kovalik and Associates). School districts from around the country and Canada attended the three-day conference held in January at Marriott's Mountain Shadows Resort. As a national leader in curriculum integration, the District will again host a curriculum conference in January 1994.

The Scottsdale School District is recognized nationally as a leader in site-based decision making.

District students are at the top on state-mandated achievement tests at all levels (elementary, middle, and high school). Although scores on standardized achievement tests are only one measure, the continued outstanding results on national testing programs give further evidence of the strength and potential of the District.

16 seniors were named semifinalists in the National Merit Scholarship Program. These students are members of an academically elite group: less than 1/2 of 1% of the nation's seniors have qualified to win this award. Over one million students in 19,000 high schools nationwide took the exam.

90% of the Class of 1993 went on to higher education (nationally, 53% continue).

District graduates attend colleges and universities across the nation including Princeton, MIT, Harvard, Stanford, Wellesley, U. of Arizona, Brown, Duke, Smith, Yale, Oberlin, Northern Arizona, Northwestern, Arizona State, Notre Dame, Columbia, Michigan, USC, and Georgetown.

Each year the President of the United States selects two graduating seniors from each state as a United States Presidential Scholar. A Scottsdale School District student has been named a U.S. Presidential Scholar eight of the last eleven years.

The *Quality Assurance Program* was adopted in the Fall of 1992. The District guarantees its graduates and will retrain graduates if a business finds deficiencies in the newly-hired graduates.

National Recognition

Sequoia Elementary School - A+ Outstanding School Recognition Program (1993)

Mohave Middle School - A+ Outstanding School Recognition Program (1993)

Cherokee - A+ Outstanding School Recognition Program

Yavapai - A+ Outstanding School Recognition Program

PANDA Programs at Hohokam and Yavapai - National award winners for special programs

Saguaro High School - Secondary School Recognition Program

Arcadia High School - Secondary School Recognition Program

National publications that have highlighted District programs recently

Expansion Management Magazine (10/92 and 10/93) ranked the Scottsdale School District as the #1 school district in the Southwest.

American School & University magazine (11/92) gave the District a citation of architectural merit for design of Mountainside Middle School.

Smart Schools, Smart Kids: Why Do Some Schools Work? by Edward B. Fiske, 1991, references Scottsdale's innovative use of computer technology in the classroom.

The New York Times (11/3/91) discussed Scottsdale's method of networking computers among schools.

Newsweek Magazine special edition on "The New Teens" (1991) highlighted district students who are leading a drive to establish a Lincoln Legacy Museum at the Lincoln Memorial in Washington, D.C.

The New York Times (3/7/90) highlighted Yavapai Elementary School's innovative use of computer technology in education.

Teaching PreK-8 (1/90) featured, as the cover story, the integrated math curriculum at Hohokam Elementary School.

Staff Accomplishments

1993 Finalist for Arizona Teacher of the Year

1993 and 1991 Chase Outstanding High School Principal Award

1993 Arizona School Middle Level Distinguished Administrator of the Year

1993 Fulbright Exchange Teacher

Arizona's Outstanding Elementary School Principal

Arizona's 1991 Presidential Award Winner for Excellence in Science Teaching

Arizona's 1991 Presidential Award Winner for Excellence in Mathematics Teaching

Arizona's 1990 Presidential Award Winner for Excellence in Science Teaching

Arizona's 1991 Foreign Language Teacher of the Year

Arizona's 1990 Foreign Language Teacher of the Year

Arizona's 1992 Young Recognized Dietician of the Year

Arizona's High School Math Teacher of the Year

Arizona's Middle School Math Teacher of the Year

Arizona's Chemistry Teacher of the Year

Two of the nation's outstanding first year teachers (Sallie Mae Award winners)

Other Awards

Mountainside Middle School has won various design/architecture awards, including:

Certificate of Excellence for Environmental Design from the Association of School Business Officials

Citation of Merit from *American School & University* magazine (11/92)

Award of Merit from 12th Valley Forward/Honeywell Environmental Excellence Awards

Mohave Middle School remodeling project won the *International Illumination Design Award of Merit* from the

National Conference of the Illuminating Engineering Society Award for the outstanding lighting and energy efficient design project in the United States and Canada.

Certificate of Excellence in Financial Reporting by School Systems from the Association of School Business Officials International (ASBO). This Certificate is the highest recognition in school financial reporting.

Community
Learning &
Information
Network

CLIN

CLIN National Initiative Proposal



EXECUTIVE SUMMARY

CLIN Inc.
1776 K Street NW, Fourth Floor
Washington, DC 20002

COMMUNITY LEARNING AND INFORMATION NETWORK

A national initiative proposal to the U. S. Government to develop and establish an education and learning information network for the nation's communities, providing accessible, individualized education and training.

The National Imperatives

- o Stem Educational Decline
- o Improve U.S. Work Force
- o Increase U.S. World Competitiveness
- o Improve Reserve Forces Training
- o Help Transform Health Care
- o Empower Local Communities
- o Leverage Dual-Use Learning Technology

- GOAL:**
- o 1,000 Community-based Learning Centers by 1996
 - o 110,000 Sites in 16,000 U.S. Communities by 2005

METHOD: Link into existing and planned telecommunications networks in cooperation with states, National Guard, K-12 schools, universities, community colleges, health care providers and the private business sector.

"On-ramp" to future technologies.

- TECHNOLOGIES:**
- o Digital video-voice "highway"
Two-way Between Classrooms
 - o Interactive TV/Multimedia Courseware
High-performance Computing in Classroom
 - o Anytime-Anywhere Access
Classroom - Home - Workplace

INCEPTION

- o Concept from U.S. Chamber of Commerce, U.S. Army, Others in 1989
- o CLIN National, a non-profit organization
 - Created in response to ARPA
 - Pilots with 16 state affiliates, District of Columbia
- o Funding from Federal Technology Reinvestment Project:
 - Department of Defense
 - Department of Energy/Defense Programs
 - Department of Commerce
 - National Science Foundation
 - NASA
- o Advanced Research Projects Agency (ARPA) Provides:
 - Seed Funding with Matching Dollars for Technology Investments

Leading to:

 - Shared Usage Fees
Business and Community Access
 - Development and License Fees
Commercial Access to CLIN Markets
 - Reinvestment/Self-Sustaining
Support Community Usage

CLIN Arizona

3

PARTNERSHIP DRIVEN**CLIN NATIONAL:**

- U. S. Chamber of Commerce
- David Sarnoff Research Laboratories
- Carnegie Mellon Institute
- National Guard and Reserves
- Electronic Data Systems
- Hughes Satellite Network
- Northwestern University
- America 2000
- Josten's Learning Systems
- National Commission of Libraries
- Long Distance Carriers
- Booz Allen & Hamilton
- Cities in Schools
- National Science Center
- National Center for Manufacturing Sciences

CLIN Arizona

4

PARTNERSHIP DRIVEN

CLIN ARIZONA PILOT PROJECT:

Phase I:

- Arizona Department of Youth Treatment, Rehabilitation
- Maricopa County Community College District

Phase II:

- Arizona National Guard
- University of Arizona Health Sciences Center
- K-12 School Districts
- Learning Research Enterprises, Inc.

FOLLOWED BY:

- All Universities, Community Colleges
- State, City and County Agencies
- Chambers of Commerce
- Health Care Industry
- Business and Industry Alliances

CLIN ARIZONA

Established as a non-profit organization affiliated with CLIN National

- o Contracting entity responsible for Federal and other funds
- o Markets excess learning and technology capacity
- o Helps Arizona partners become successful

OBJECTIVES

- o Achieve Success with DYTR Pilot Project
- o Establish 20 to 50 Community-based Learning Centers by 1996
- o Become Center of Competence for CLIN
 - Learning Technology Transfer
 - Interactive Courseware Development
 - Develop Technology Partners

MODEL COMMUNITY LEARNING CENTER PARTNERSHIPS

- o School Districts
- o City and County Governments
- o Community College/University
- o Chamber of Commerce/Business Community
- o National Guard
- o Health Care Providers
- o Business Incubator

TECHNOLOGY

- o 'Open Systems Architecture'
- o Vendor Neutral
- o Existing Technologies
- o Test-bed for Future Technologies

DISTANCE LEARNING COURSEWARE DEVELOPMENT

CLIN Arizona acts as a catalyst for Department of Defense, Federal laboratories and agencies, universities, community colleges, education-learning software developers to create education's future.

- o Instructional Conferencing
- o Multimedia Databases
- o Simulation Learning
- o Intelligent Computer Tutors
- o Team Learning
- o Virtual Reality

Ms. ENGLISH. Thank you. The second panelist is Ms. Diane Jezek Powell. I have met Diane before on many occasions in the legislature. Welcome. She's president of the Governing Board, Scottsdale School District. She's the former State and national legislative chairperson of the Arizona Parent Teacher's Association. She also is a past member of the Governing Board of the East Valley Institute of Technology, and has been an advocate for children's health, welfare and educational issues for many years. Thank you very much for being here.

Ms. POWELL. Thank you, Representative English, and thank you for bringing me here today. I'm honored to have an opportunity to share with you our successful ventures into business partnerships.

Six years ago our district began to expend serious efforts at educational reform with the development of our first community-based strategic plan, which you'll find in your packet. Let me show you what your packet looks like, if you haven't already located it. In our district we strongly believe in the African proverb, "It takes an entire village to educate a single child." Our business community has become a valuable partner in helping us set the visionary course for our school system, both today and in the future.

Because education is about the sharing of knowledge and because technology has allowed our pool of knowledge to exceed the grasp of any single entity, partnerships must come in all shapes and sizes if educators are to receive the well-rounded database that we need for good decisionmaking. Major governmental agencies, nonprofits, and the business community, have all been valuable partners in helping us to create an educational system of excellence. These entities are all critical components of this village that we call Scottsdale.

Before this year the majority of our business partnerships fell under a cooperative model. Utilizing this format, a business might choose to underwrite a program, donate materials, deliver specific services, such as tutoring or teaching a class or providing limited staff development, or they might receive training from our district in the form of parenting classes, as some of the other speakers have spoken to you about. In this type of partnership, more often than not, the local school district is given something based on that particular business' commitment to education. There are hundreds of local school examples of cooperative business partnerships in our district.

But the shining example I would like to share with you today began three years ago with Arthur Andersen. Arthur Andersen guided a districtwide committee of educators, parents and business leaders through a consensus-building process in order to design our brain-compatible learning environment. The birth of Aztec Elementary School this fall is the result of this valuable partnership. Our best estimate of the Arthur Andersen in-kind donation for this process was \$20,000 to \$30,000. With today's stretched-to-the-limit budgets, our governing board and administration could never have agreed to an expenditure of this magnitude.

More important, Arthur Andersen allowed us an opportunity to challenge and explore traditional elementary education by bringing together a cadre of human creativity. With the knowledge gained out of a process such as this, we were able to make better decisions

on how public dollars should be spent. This also allowed us an opportunity to plan for the future instead of reacting to the demands of the present. We have become long-range planners, understanding that our decisions today profoundly affect the employees of the future.

The success of numerous district cooperative project partnerships have led us to a new level as we shift our focus to the more difficult to form collaborative partnerships. We are currently using the business partnership model designed by Motorola, who's already spoken to you today, and this is our guide in developing quality partnerships. You will find it in your packet.

Our staff facilitator, Mrs. Leslie Bennett, has become unyielding in her use of the Motorola model because the process ensures successful long-term relationships. And it is based basically on a TQM model of operation. And, as I've already told you, it's included in your packet. In the collaborative model partnership, the school and the business work together with a shared vision, developed goals, and accountability throughout the relationship. This form of partnership is an equal one instead of unequal in the form of just giving gifts, because it's dedicated to recognizing the needs of both the school and the business. The model reflects the open-door, community-based belief of the Scottsdale community. We do not expect businesses just to give us something. We want our business community to become a serious partner in the education of all of our children.

Briefly, to highlight for you the key points of a collaborative partnership, you will recognize one when business and schools are unified, set common goals, make long-term commitments to each other, commit time, money and personnel, involve many people, have shared decisionmaking at all levels, interact and negotiate with each other, reciprocate, are dedicated and loyal, and are accountable. In short, the key to a collaborative partnership is the, again, the exchange of information and the transfer of knowledge in both directions.

Our Motorola partnership currently is focused on Supai Middle School. This partnership, following the model, was born out of thorough needs assessment that identified the strong desire for human resources of both the students, the teachers, and Motorola employees. Through the development of common goals, it was decided to focus all of the efforts this year on student academic success. Beginning small, with 50 Motorola employees who are volunteering one hour per week in Supai, they are working to help young teens achieve academic success. This excellent opportunity for the students yields not only the academic tutoring that at-risk students need, but equally, and maybe more important, it provides the mentors and the role models for impressionable teens to emulate.

As I mentioned previously, accountability is a key component, and that is followed closely through the monthly meetings of the Motorola and the school partners, the coordinators. I don't want to go in depth into our Saguaro High School career center, because Barbara is going to do that, and Frank Edwards of Dial Corporation are certainly our experts on that. But what I would like to point out is that our Dial partnership began as a cooperative part-

nership and has now evolved into a valued collaborative partnership.

The Dial partnership is a shining example of long-term commitment, interaction and negotiation, accountability and loyalty. The students at Saguaro have been beneficiaries of this excellent partnership.

Because time today is limited, I would like to touch on just a few other of our excellent partnerships. Our example of municipal, district and business partnerships is just in the beginning stages with the Scottsdale Chamber of Commerce and the City of Scottsdale. The project titled, "Preparing Students for the Workplace," has three major components: teachers will shadow people, business people, in the workplace, is the first component; business professionals will talk to students about necessary skills required in the workplace, is the second component, and the third is businesses will provide summer internships for teachers.

This shadowing program will enable teachers to gain a better understanding of the business world, as Mrs. Guy has already pointed out. And it will allow us to help students understand the skills that they need for successful competition in the job market. The creators of the project, again, the Chamber, the city, and the district, are looking for multifaceted businesses to become involved in this endeavor so that the teachers are exposed to as many different facets of the business world as possible.

They need to understand leadership, application and breadth of knowledge and be exposed to this very different world of business. We know that teachers on the whole love children and want them to be successful. They want to provide their students with the tools of success. To do that teachers must be educated in a hands-on, brain-compatible learning environment to the world of work, and this partnership will allow that to occur. This will be extremely helpful to our educators in the selection and fine tuning of curriculums that then meet student needs.

A similar focus is soon to be begun with Project SWRL, and this is in your packet as well, a partnership with Bank One, Salt River Project, Discover Card, Samaritan Health Systems and Sun Health Corporation. Project SWRL is also oriented toward teachers in the 5th through 12th grade and will bring teachers and businesses together to enrich our curriculum in speaking, writing, reading, listening as they relate to the world of work.

There are three identified outcomes in this effort to enrich teaching of communication skills, a key component and demand of businesses throughout America. They are, number one, to use communication skills effectively; number two, to understand how communication skills help people learn and to use other skills, and finally, to understand the increasingly important role of communication skills in virtually every part of the business work environment.

This pairing of teachers with business partners will allow the best of both worlds. The businessperson, who knows what the output of the public school system is doing to their training expenses, and the educator, who understands the difficulty of adapting curriculum to the multiple learning levels coupled with the psychological needs of children. As we are all very aware, the project—this problem is not easily solved. Project SWRL is an excellent ex-

ample of the leaders of both worlds, academic and corporate, coming together for the benefit of children.

Finally, I would like to share with you one of our most heart-warming partnerships, the brainchild of the Robinson's May Company, we are very fortunate to participate in their nationwide Oasis Project. Very briefly, our partnership with Robinson's began four years ago and continues to grow annually. Robinson's and our district work in cooperation to train and place older adults into our elementary schools as tutors and caregivers of at-risk children. Currently 9 of our 17 elementary school sites are blessed with 250 loving and caring, and most important, patient, retired citizens who focus their undivided attention on helping one child. The results of this type of relationship are profound for both the child and the adult in our transient city where extended families are certainly the exception.

There is, of course, much more to share than time today permits. I would just like the subcommittee to know how fortunate the Scottsdale School District is for our partners in education. From our city, to our businesses, to our retired community, to our parents; we are truly a village dedicated to the education of children. Again, I'd like to extend my personal gratitude for this opportunity to share with you what we're doing in the Scottsdale School District, and I am excited to answer all of your questions.

[The prepared statement of Ms. Powell follows:]

STATEMENT OF DIANE JEZEK POWELL, PRESIDENT, SCOTTSDALE UNIFIED SCHOOL DISTRICT GOVERNING BOARD

Chairman Kildee, members of the committee, I am honored to have an opportunity to share with you our successful ventures into business partnerships. Six years ago our district began to expend serious efforts at educational reform with the development of our first community-based strategic plan, which you will find in your packet. Because we strongly believe in the African proverb, "It takes an entire village to educate a single child," our business community has become a valuable partner in helping us set the visionary course for our school system, both today and in the future.

Because education is about the sharing of knowledge, and because technology has allowed our pool of knowledge to exceed the grasp of any single entity; partnerships must come in all shapes and sizes if educators are to receive the well-rounded database necessary for good decisionmaking. Major governmental agencies, non-profits, and the business community, have all been valuable partners in helping us create an educational system of excellence. These entities are all critical components of our village that we call Scottsdale.

Before this year, the majority of our business partnerships fell under a **Cooperative Model**. Utilizing this format, a business might choose to underwrite a program or donate materials, deliver specific services, such as tutoring, teaching class or providing staff development, or receive training from our district in the form of school-parenting classes. In this type of partnership, more often than not, the local school or district is given something based on that particular business' commitment to education. There are hundreds of local school examples of cooperative model business partnerships, but the shining example I would like to share with you began three years ago with **Arthur Andersen**. Arthur Andersen guided a districtwide committee of educators, parents and business leaders through a consensus-building process in order to design a brain-compatible learning environment. The birth of **Artec Elementary School** this fall is the result of this valuable partnership. Our best estimate of the Arthur Andersen in-kind donation for this process was \$20,000 to \$30,000. With today's stretched-to-the-limit budgets, our governing board and administration could never have agreed to an expenditure of this magnitude. More important, Arthur Andersen allowed us an opportunity to challenge and explore traditional elementary education by bringing together a cadre of human creativity. With the knowledge gained out of a process such as this, we were able to make better decisions on the dedication of public dollars. This allowed us the opportunity to plan

for the future, instead of reacting to the demands of the present. We have become long-range planners, understanding that our decisions today profoundly affect the employees of the future.

The success of numerous district cooperative partnerships have led us to a new level—as we shift our focus to the more difficult to form **Collaborative Model** partnerships. We are currently using the business partnership model designed by Motorola as our guide in developing quality partnerships. Our staff facilitator, Mrs. Leslie Bennett is unyielding in her use of the Motorola model because the process ensures successful, long-term relationships. A copy of the Motorola Business/Education Partnership Guidelines is included in your packet.

In the collaborative model partnership, the school and the business work together with a shared vision, developed goals, and accountability throughout the relationship. This form of partnership is an equal one dedicated to recognizing the needs of both the school and the business. The model reflects the open-door, community-based beliefs of the Scottsdale community. We do not expect businesses to just to give us something. We want our business community to become a serious partner in the education of all of our children. Briefly, to highlight for you the key points of a collaborative partnership, you can recognize a collaborative partnership when the business and school:

- are unified,
- set common goals,
- make long-term commitments to each other,
- commit money, time and personnel,
- involve many people,
- shared decisionmaking at all levels,
- interact and negotiate with each other,
- reciprocate,
- are dedicated and loyal,
- are accountable.

In short, the key to a collaborative partnership is the exchange of information or the transfer of knowledge in both directions.

Our Motorola partnership currently is focused on **Supai Middle School**. This partnership, born out of a thorough needs assessment, identified the strong desire for human resources of students, teachers, and Motorola employees, and also of the more common financial needs. Through development of common goals, it was decided to focus all efforts this year on student academic success. Beginning small during this pilot year, 50 Motorola employees are volunteering one hour a week to help young teens achieve academic success. This excellent opportunity for the students yields not only the academic tutoring at-risk students must have to become successful, but equally important, it provides mentors and role models for impressionable teens to emulate. As I mentioned previously, accountability is a key component and is followed closely through the monthly meetings of the school/business coordinators.

I do not want to explain our **Saguaro High School Career Center** in great detail, because Frank Edwards of **Dial Corporation** and Barbara Buckles of **Saguaro High School** are undoubtedly the experts on the project and deserve all recognition and acclaim, but I would like to point out that our Dial partnership began as a cooperative partnership and has evolved into a valued collaborative partnership. The Dial partnership is a shining example of long-term commitment, interaction and negotiation, accountability, and loyalty. The students at Saguaro have been the beneficiaries of this excellent partnership.

Because your time is limited, I would like to touch on just a few other of our excellent partnerships. Our example of municipal, district and business partnerships is just in the beginning stages with the **Scottsdale Chamber of Commerce** and the **City of Scottsdale**. The project titled, **"Preparing Students for the Workplace,"** has three major components:

- Teachers will shadow business people in the workplace,
- Business professionals will talk to students about necessary skills required of the workforce of the future,
- Businesses will provide summer internships for district teachers.

This **shadowing program** will enable teachers to gain a better understanding of the business world and the skills students need to successfully compete in the job market. The creators of the project are looking for multifaceted businesses to become involved in this endeavor so that teachers will be exposed to the many different skills that are required for knowledge and flexibility in the corporate/business climate. To understand leadership, application and breadth of knowledge teachers must be exposed to the very different world of business. We know that teachers, on the whole, love children and want them to be successful—they want to provide their students with the tools of success. To do that, teachers must be educated in a hands-

on, brain-compatible approach to the very different environment of the private sector workplace. This partnership will be extremely helpful to educators in the selection and fine-tuning of curriculum to meet the identified needs of the world of work.

A similar focus is soon to be begun with "Project SWRL" in partnership with **Bank One, Salt River Project, Discover Card, Samaritan Health Systems and Sun Health Corporation**. A copy of the brochure is included in your packet. Project SWRL, oriented toward teachers in grades 5th through 12th, will bring teachers and businesses together to enrich the curriculum in speaking, writing, reading, listening as they relate to the world of work. There are three identified outcomes in this effort to enrich teaching of communication skills, a key request of businesses throughout America. They are:

- To use communication skills effectively,
- To understand how communication skills help people learn and use other skills, and,
- To understand the increasingly important role of communication skills in virtually all jobs of the future.

This pairing of teachers with business partners will allow the best of both worlds, the businessperson, who knows what the output of the public schools is doing to their training expenses, and the educator, who understands the difficulty of adapting curriculum to the multiple learning levels coupled with psychological needs of children. As we are all very aware, this problem is not easily solved. Project SWRL is an excellent example of the leaders of both worlds, academic and corporate, coming together for the benefit of children.

Finally, I would like to share with you one of our most heartwarming partnerships. The brainchild of **Robinson's-May Company**, we are very fortunate to participate in their nationwide **OASIS Project**. Very briefly, our partnership with Robinson's began four years ago and continues to grow annually. Robinson's and our district work in cooperation to train and place older adults into our elementary schools as tutors and caregivers of at-risk children. Currently 9 of our 17 elementary school sites, we are blessed with 250 retired, loving, bright, and most important, patient citizens who focus their undivided attention on helping one child. The results of this type of relationship are profound for both the child and the adult in our transient city where extended families are the exception.

There is, of course, much more to share than time permits today. I would just like to let this subcommittee know how fortunate the Scottsdale School District is for our partners in education. From our city, to our businesses, to our retired community, to our parents; we truly are a village dedicated to the education of our children. Again, may I extend my personal gratitude for this opportunity to share what education and business are doing right for America's future generations. I will be glad to answer any of your questions.

Ms. ENGLISH. Our next panelist is Mr. Frank Edwards, Director of Executive Development and Education, Dial Corporation. Before coming to Dial he worked as a technical instructor and manager for training and development in human resources for GTE. He currently oversees Dial's management education plans and is an active board member of the Arizona Business Leadership for Education, ABLE organization, and is here to tell us about Dial's partnership with Scottsdale School District. Thank you.

Mr. EDWARDS. Yes, thank you, Representative English for this invitation to join you this afternoon.

As you may know, the Dial Corporation was a public school partner even back in the days when that simply meant donating some computers or three-ring binders, you know, to the local junior high, or sending employees out to tutor kids, which we still do through the Junior Achievement Program and through schools that come to us and ask for that kind of tutorship.

But all that changed in 1990 when President George Bush addressed the annual meeting of the Business Roundtable of CEOs, and I believe that occurred at the Governors' Conference. He told them that if public education partnerships and reform were to become a reality, they would have to do much more than we had traditionally done in the past. I think President Bush was concerned

that there's not a constituency out there that can make public education happen. He didn't see it in the parents and their ability to come together as a single entity. He looked at a lot of other organizations, but my sense is he went to the Business Roundtable of CEOs—there are about 220 of those which lead, basically, the Fortune 500—and he said, "I'm coming to you, men and women, to help me," and then it was Lamar Alexander, addressed this issue of, let's call it partnership, but really it was something, of course, much more than that.

I don't think John Teets, our chairman, knew what he was buying off on at that time, but he did raise his hand and he said, "We think we know what partnerships are and we'll continue to do that, and with Lamar Alexander we'll continue to do more." But really what he was doing was probably welcoming us to the age of collaboration, at least the kind of collaborative that brings business and schools together with both local and national government, with service agencies, primarily social service agencies, and other concerned parties who are in it, really, for the long haul, versus the kind of sporadic partnerships that used to occur in the past, who really have a lot in it to work together.

For Dial Corporation, of course, a lot of that is financially driven, but as Director of Education, as you know, the first part of my title deals with Executive Development. For the last four years, approximately 6 to 9 percent of my budget each year has been shifting out of Executive Development, which, quite honestly, is where the biggest return is for our organization. The executives get less development because more and more of that budget keeps getting shifted down to entry-level employee development, and that's occurring for all the reasons I'm sure that you've heard in the past.

So anyway, we see it as much more of a collaborative than what it's probably been traditionally in the past, what we called a partnership. If you want to really get Dial Corporation excited when you talk about partnerships, and that's sort of what the call was about that came to my office, I don't know if we're backing up two or three or four years and talking about what they've been in the past, but our excitement is really generated when we talk about systemic change.

And Dial's been very involved, you mentioned ABLE, been very involved with Lisa Graham, Bev Herman, Barry Aarons, the Governor's office, because when President Bush came to the Business Roundtable of CEOs, he asked them to join with the Governor, Democrats, Republicans, whoever, and let's come together with the education establishment and bring about a partnership for change. And so, systemic change is where Dial Corporation is now putting its dollars. Those are a lot more dollars than we've put in the past under these little, spotty individual partnerships that have, again, donated computers, which has been real easy. I've got a budget, I just write a check. It's a fairly large check that we give to Barbara Buckles each year, but that's easy.

I say it's easy in terms of writing the check, what's hard is what's been going on the last, say, two or three years, and it's getting ready to get a lot harder in the next six months in terms of what the Dial Corporation calls "Partnership for Change." And that's in the legislation that you all are reading about daily. The

headlines this morning was Bev Herman's idea about what partnerships and reform might look like. We certainly have our ideas. I'd be happy to talk to you one on one about those. But I think the exciting story today would come from Barbara Buckles and the things we're doing as an individual partnership with Saguaro High School. Thank you.

Ms. ENGLISH. Thank you. The last member of this panel is Ms. Barbara Buckles. She is a school counselor and works with the career center at Saguaro High School in Scottsdale. She is a member of Saguaro's site-based committee working on local control initiatives with parents, and a member of the Arizona Counselor's Association. She has also served as a classroom teacher and has worked with students for more than 25 years. Welcome.

Ms. BUCKLES. Thank you, very much. I would like to give a little bit of the history behind our partnership with Dial Corporation. We have a Career College Center which is state-of-the-art, but what led up to us having this partnership was the fact that many years ago we had career centers in Scottsdale for our high school students, with the declining moneys available, as many things had to be cut, that was one of the things that disappeared. We had meetings and tried to talk about ways we might get career centers back and never could seem to get the funding.

So about five years ago Leslie Bennett, who has been mentioned already today, was parent president of our—was the president of our parent group. And she and I got together and decided that we would approach a business and ask them to help us by forming a partnership to benefit our students. The reason we did this is we had parents who were very willing to volunteer their time to help our students, and they would come three days a week, and they would sit up in this tiny window in the guidance area, it's a very small area, about as big as this table, and try to give students computerized guidance information so they could find out more about careers and colleges. The space was not a good location, it was always a different parent, and while they did their very best and they did very good work, it was just not something the students really could count on because the parent could get sick or they might not be there, and it was always somebody different, so it was a little bit of a difference every time.

We also had about 200 videotapes that one counselor tried to farm out for students that wanted to see them. We had brochures in one area. Things were scattered, and we were not delivering a good program to our students with all the things that we thought we needed to give to them. So we put together a very skimpy budget and went to the Dial Corporation. And we were trying to do it on a nickel and a dime to keep it very inexpensive so somebody would fund this for us. And it was a very pleasant experience because the Dial Corporation looked at our budget and said, "Well how much more would it cost to do it right and have a person that would be there full time and have benefits? Give us two proposals and let us decide which one to take." And they chose the better proposal, which provided us with a full-time person.

And it only got better after that because when John Teets from Dial Corporation came to our school for the dedication of what we were very proud of, a little tiny room, he was astounded to see that

we were trying to do a career and college center out of this almost closet. And he said that he would like to have a place that students could go to look at their future that would be like stepping into corporate America, and that is what we have at Saguaro. Two classrooms were remodeled, by the Dial Corporation, into a very fine showcase career and college center where students can go individually or in classes. We have an aide full time that works with the students helping them. If classrooms want to come in, she orients them to the room and they do career searches, college searches. We have a place where they can meet with career people, they can meet with college representatives, and we've had many compliments. People haven't seen anything quite this nice in most parts of the country.

The aide does a career day for the students. She has job placement for the students that need jobs. We have an ongoing program. We formed a steering committee this past year made up of parents, teachers and a Dial Corporation employee, and we look at the goals of the room in the fall, which we should have our meeting this November, and then at the end of the year we evaluate whether we've met our goals and if we should change our goals for the next year. We submit a budget. We report on how the money is spent, because we believe that we have to be accountable. If a corporation is going to come into our school and bless our students like this, we have to make sure that we earn their trust to hopefully get the funding for the following year.

And we feel very fortunate that we have had an ongoing five-year partnership with them, because one of the things that was brought out when we first started to seek a partnership was, well, those don't last. You have them for a year or two and then everybody's disappointed. So it's been a very fine experience, and I look forward to answering any questions you might have.

Ms. ENGLISH. Thank you, very much. I'd like to start by asking a question of Mr. Edwards. I think it is absolutely wonderful what Dial Corporation has done, and I want to know how we could get you interested in some of the rural schools who have less of a support structure than, perhaps, some of the metropolitan areas. We all know what the involvement means to that community. What would it take to get the corporate world excited about rural schools also?

Mr. EDWARDS. You heard the last part of Barbara's comments, and that is that we set goals for that organization. Unlike many of the rural organizations and even some of the metro, we said we're in it for the long haul, but we're very kind of goals oriented; sorry, but that's the way business tends to work. We're going to establish objectives for your organization. We want to see this many students have this kind of outcome, and we're going to monitor it over the course of the year.

Believe it or not a lot of schools don't want business in meddling with the way that you give them the money and, "just trust us, we'll get the job done." Saguaro said they will let us come in, and we've monitored, and so we've seen the outcomes that we look for. And that's part of my job, and so we write the check each year.

Now to answer your question about the rural. First of all, they're not talking to us. I guess they have to, you know, they have to

come to us and ask us for help. I have talked to a couple of rural organizations. Either business talks a language that's frightening to them or we—they don't understand what we're looking for. But I think you're seeing a trend in business to want to find much more accountability in terms of where the dollar is going. And they have the right to turn away our dollars, but we also feel like we have the right to ask for certain outcomes and expect to be able to measure those. And it's in the measurement process that I think we lose some of that collaboration.

Ms. ENGLISH. What you're saying is very interesting to me, I partially agree with what you're saying, but what we have heard from educators and the educational community for years is that the accountability has manifested itself in overregulation, overaccountability, overfiling forms, and that they spend to much of their time and limited revenue in being accountable. And so how do you get past that step? Business comes to us all the time and says, "We're tired of all these forms, trust us," you know.

Mr. EDWARDS. Yes.

Ms. ENGLISH. Doesn't that take a little movement on the side of the corporate world to recognize its accountability factor also?

Mr. EDWARDS. Yes, I agree. We're learning. You know, we're partnering. It's a brand-new kind of area for us as well. Obviously we think of ourselves as bureaucracy busters, and so if Saguaro comes to us and says, "These forms that you're asking us to fill out is getting in the way of us accomplishing our mission," then we'll certainly relook at the forms. But it wasn't our first inclination to say, "Here is a stack of forms, and you fill them out during the course of the year and give them back to us at the end of the year." I send out one of my people, who works with Barbara on an informal. She goes out and looks; she doesn't have to talk to anybody; she talks to customers, i.e., the students. And our sense of measurement partly comes from the students and where they go and how they go where they go, and the kinds of colleges and jobs they select.

So, you're right, if we're imposing more of the same on schools, shame on us, and it's not the kind of collaborative we're trying to generate.

Ms. ENGLISH. It might be that you're getting accountability without imposing it, and if you're doing that, I want to know what that system is. And that's why I asked. I mean, obviously, you are satisfied that they are accountable, and I just wonder if it's burdensome or not.

Mr. EDWARDS. Well, I trust Joanna Wickovitz to conduct the interviews. It's probably less formal than maybe what I inferred, but we look at the kids, we track the kids and where they go. Obviously, as I pay the bill, I'm paying each month for how much—that computer is online, how much it gets used. If it's not getting used, then we're probably—either it's not being marketed in the proper way or it's not a value to the school, and so we'd probably pull out. But each year the system gets more and more use, and we write more and more checks for online time.

And then, of course, we look at the placement of the children. So it's really very outcome based. We know what we wanted the sys-

tem to do, we look at the kids and where they go, and we've determined that to be a—you know, again, money well spent.

Ms. ENGLISH. Well be prepared to get some calls from some of my rural friends.

I have another question. Dealing with the role of parents in developing that partnership. I think it's one of the areas that we have really less conversation about than I think is necessary. In all of your particular areas, can you see ways that we can develop the role of parental support and enthusiasm to a higher degree than we now have? I mean I really believe that's a key component here. I know each of your areas are a little bit different, but I think parental involvement is important in every area. Could each of you just visit that issue, starting with you, Ms. Buckles?

Ms. BUCKLES. Sure. We invite the parents to come into our career center, and we try and market it to them so that they are aware of it through the parent newsletter that goes out every month. Through open house in the fall, we have a tremendous out-turning of parents, even for a high school I think, when we fill an auditorium of 1,000, that can fit a thousand people in and we can fill it. And we had all of them invited over to the career center so they could see it. And we, every time we get a chance, we just plug it because we want them to know that it's there, because sometimes it's that parent that encourages that child to come in and use the center. So we market it all the time, at every opportunity.

Ms. ENGLISH. Has it been successful in your eyes?

Ms. BUCKLES. In the use of parents using it, do you mean? Is that what you're speaking of?

Ms. ENGLISH. Has your approach to parental involvement reflected parental involvement? I mean, is it happening?

Ms. BUCKLES. We've had parents come, yes, but I wouldn't say we have high numbers of parents come. I don't know if it's because their son or daughter doesn't want them coming on campus; you know, it's sort of embarrassing to have mom or dad come, but we have had them come, yes. But not in large numbers, no.

Ms. ENGLISH. Okay.

Ms. BUCKLES. We do everything we can to make them aware of it, and know they're welcome.

Ms. ENGLISH. Okay, thank you.

Mr. RECK. I believe parents are interested in the same end result that the business community is, and that is that they want to see their child successful. And in this ever-changing world, one of the areas that they need to become more successful in is not just an understanding, but an application of technology.

And I believe we have sort of a dichotomy in this age today, where in a lot of instances, and more and more, we're seeing that the children are more familiar with the technology than their parents. And we're seeing parents reluctant then to become involved for fear of showing some failing of some kind. And we're hopeful, through the Community Learning Information Network in establishing these community-based learning centers, that they will entice the parents in the evening hours, as well as the children during the daytime.

There needs to be an education, not only at the grade school level of the children enrolled, but also of their parents. And we think

that as the parents find and recognize the values in the enhancement to their children's careers that these technologies will bring, that they'll become more interested themselves, and they will find themselves sharing, indeed, more with their children, rather than having their children going separate ways.

And what we're talking about here is a new concept. It's there are no hard-and-fast experiences that we can relate to. We're talking about things that need to change, and we're hopeful, even without CLIN, if it doesn't occur, that the impetus that it has established is going to carry forward and that we will begin to create these learning centers throughout the State.

Ms. POWELL. At our district level we've looked at several different ways of making this happen. It's a very complicated puzzle, and parents today are quite busy. Most of our parents work outside the home, both the father and the mother. And so what we've tried to do is first, we set standards at the district level that say, we expect parents to be involved, period. We don't want to hear a lot of excuses on why they're busy or not busy, if their students have problems, we are willing to adjust our time schedules to meet their needs and meet with them, and we expect them to make time for us and say that their children's educational part of their life is very important. So we set the standards at the district level.

Second, we're a quality-managed district, the parent is a customer. We are doing extensive in-staff development, teaching from the secretary, to our employees in the kitchen, to our teachers and our professionals at the top end of the line, that they darn well better make sure that parents' questions are answered and answered without the runarounds that we were talking about earlier where someone has to continually call numerous different employees to get an answer.

Part of the way that we do that is make sure that our communication system is down pat, and parents have information on who to contact. And I don't have it with me today, but we have available who's who and where to call for everything, type of information. And that way for the parent that's uncomfortable maybe starting with the teacher, because the problem's in the classroom, they automatically know who the next person is on the chain of command that they can call and talk to and then work through the system. So through our parent counseling and through our published information we make sure that people know who to call.

And finally, we are a site-based shared decisionmaking district. We have site-based councils at every school. The quickest way to get parents involved in a public school district is for site-based councils to make a decision that the majority of the parent population in that community disagrees with. And where we have seen this happen consistently is on year-round calendars. We have parents coming out of the woodwork that never cared less about education before, who suddenly have found out that their schools are site-base managed and that the district governing board has allowed waivers for policy. If that particular policy starts at the site council, they debate it, they, you know, just say for example, send out a survey to parents, parents choose not to read the survey, by the time it gets up to the district level and we've given a waiver and that policy change is implemented for that local site, we are

finding parents are now reading what's coming home in the backpacks and what's being mailed to them through the district mail. Because they are recognizing that the local schools are dedicated toward reform and are going to make some changes.

So I think that certainly site-base councils and that type of parental input, where the parents' opinion truly matters, has definitely changed the way that parents are involved in our school system.

Mr. EDWARDS. I like what Diane had to say because she used the term, "suddenly found out." And I think when parents begin to suddenly find out what's going on in their schools, then they gain a little interest. It's like, how does the Dial Corporation get its customers involved with the way it runs its business? Well, we issue something every year called an annual report, and of course, we send quarterly reports out, but we tell our customers what it is we're doing with their money, what our long-range goals are, what's happening in our organization, and we try not to let them suddenly find out, but get them involved with what's happening.

Why can't schools have report cards that talk about things such as the goals of the school, maybe the previous year's attendance or their academic goals? I'd love to know what my child's school's academic goals are. The attendance of the students; how about the dropout rate of that particular school. Maybe you ought to talk about the business and education partnerships. I'm amazed at our employees who don't even know that we're in their schools spending a lot of money to help their kids select either careers or jobs and they don't even know about it, let alone that Dial's doing it.

Let's talk about discipline. We all agree there's just awful things happening in our schools. Does my school want me up there talking to them about discipline issues or want me to partner with them? I really would like to. Am I welcome up there? I don't know. The reason I picked this chair, the lady that was sitting here just before I came in was on a soapbox a couple three times, and I said, well that's great because I don't have to mention it then about some of the things she's already discussed. But let me reemphasize one point she said. She thought it would be nice if schools saw parents and kids as customers, and when you see them that way, then you have a whole different attitude about them when they walk in the front door.

Ms. ENGLISH. Diane, do you want to talk about report cards?

Ms. POWELL. I would love to talk about report cards.

Ms. ENGLISH. It was the opening line, wasn't it?

Ms. POWELL. Yes, Frank couldn't have done a better job introducing what I would like to talk to you about now, and that is the Scottsdale Public Schools Annual Reports on all of our local schools. And I will be glad to leave my copy of the manual with you today, if you would like.

Last year we began a process of doing report cards on every single one of our schools. It only cost us \$250 to produce the report cards for the entire district and make them available to our parents. We see the annual school report cards as a key piece of Choice; if we do not provide parents the information on what's going on in each of our schools, how can they ever make an intelligent choice on what schools their children should be in.

And this has been something that's particularly important to me, because I am a parent who uses Choice, and both of my children are in schools that are out of their boundary areas, so I drive them. They're in Scottsdale schools but they're in schools that are out of their boundary.

In our annual reports it covers many of the issues that Frank hit upon, and I—you know, I'd have to look back through on our business partnerships, but certainly that's a piece that we could add. We make this available then to our Chamber, which is a critical component to our school system, to any realtor in the area that would like to show it to prospective people that are coming into the community so that they can choose the area that they would prefer to settle in for their children, based on what those schools specialize in, and then again, a manual would be at every school and parents would have report cards on their own school.

Also, our local newspaper is excellent in coverage of education, and they are going to highlight many of the issues. And to just touch briefly on the discipline issue. Discipline, as you well know, Congresswoman English, is parental involvement is required in developing all policies on discipline. And so that is one area that we're very involved in, and we have a lot of parents that do address it. Many times, well for example, I was talking to a principal last week, and he was frustrated with a couple of his discipline problems. And I said, "How many students do you actually have in this school?" And I believe it was 1,500. And I said, "How many students do you actually have serious problems with?" He said less than 50.

On the whole the press and business consistently talk about the problems with our public schoolchildren. And every day I go into our schools and see that on the majority we have wonderful young people in our schools today who are doing, in some ways, a better job than the baby boomer generation, which I'm a member of, did. These kids do care about authority, they are very concerned about getting jobs. They are struggling to learn things that we never had to learn when we were going through school. The curriculum that they're being exposed to is huge, and the amount of knowledge that they're being asked to, you know, to assimilate is also huge.

So we're just, you know, at the end, that's where reform started in the U.S. We're on the way. It takes time to change bureaucracies. And each little piece, Frank couldn't have known about this, I just got this about two days ago. So, you know, I don't want him to feel bad that he wasn't knowledgeable about it. And if he doesn't currently have children enrolled in Scottsdale schools, he wouldn't have received a report card last year. We are trying to make change and be accountable to our parents. And so I'm very proud that he gave me a chance to get on my soapbox.

Ms. ENGLISH. I see a smile, I knew there was a hedge there, thank you. Jolene?

Mrs. UNSOELD. Mr. Edwards, you mentioned that in order to make an investment in the education system you want to see certain outcomes, but you didn't elaborate on that. And probably also Mr. Reck has ideas on what kind of outcomes you would expect if you're going to make an investment.

Mr. EDWARDS. Okay. So you want me to—I'm sorry, what was—

Mrs. UNSOELD. Well, just so I've got some idea when you say "certain outcomes," I may have a totally different vision of what that is than you've got. So I just wanted to get enough sense of what you are alluding to so that I understand your statement.

Mr. EDWARDS. Okay. Again, mine may be a little bit too business-based for you, but as I talked about, if you just look at my operating budget, or most major corporations' operating budget, those tests have remained the same. They test reading skills at the ninth grade level, math skills at the seventh grade level. I know you've been all through this before, but we track that over time and that's one concern.

How about just the way they walk into Dial Corporation and try to impress our people in the interview process? We're grammar sensitive at Dial in terms of the way they would talk to customers on the phone. And we'd like for the subject and the verb to approximately agree with each other, you know. We'd like for them to be—to say yes, rather than yeah. It's maybe something as basic as the way they dress.

I don't know where the kids get the idea that Dial Corporation's probably just a 13th grade, and so we still continue to act very casual, very—I don't know what the term is, but it's like this isn't the 13th grade, and you've got to be serious about what it is you're trying to do in front of us. And it's like, I know you said that there's a lot of concern about not being able to find jobs, but they're not going to continue to find jobs at Dial Corporation until they can do math at seventh grade, speak correctly at basically the ninth grade level, that's what our tests were supposedly benchmarked at, and until they show, I hate to even say the word, a little respect. But if you can't show respect to the people doing the interview, we wonder how you're going to work with the boss—

Mrs. UNSOELD. Don't apologize.

Mr. EDWARDS. [continuing] and because I'm the human resources department, I'll lose my job if I continue to send kids over that they send back to me and say, "Where did you find this group?" I think they live in the real world. Well this is what's coming out of public schools, and they're a little different. Either we, as older adults, have to lower our expectations, or the kids have to bring up what it takes to get into Dial.

But it's the same—you asked the question, it's kind of like pornography, is that a good analogy?

Ms. ENGLISH. Boy, I don't know, it's on the record. Go ahead.

Mr. EDWARDS. You know we kind of know a bright kid when they come to us, that's energetic and enthusiastic about life and optimistic, and we know—we see it in their speech, we see it in their dress, we see it in their eyes. And somehow, that's not there like it used to be. And so maybe we have to, as a business community, change our outlook for the kids.

Mrs. UNSOELD. I'm dying to do a follow-up, but I want to know if Mr. Reck has anything he wants to add to that, or either of the two of you? I thought particularly because they're coming from business and investing in—

Mr. RECK. One of the things we tend to overlook in this whole dialogue is our culture is ever-changing, and not to say, as Frank suggested, that we need to lower our standards, but we do need to adapt them in some ways so that they are acceptable to the younger generation, so that they can recognize them as having values.

And the business community sometimes has—not sometimes, has failed, failed woefully there to communicate that to the younger generation. The business community is detached from the younger generation. And so it's not unexpected that they're going to find those youngsters coming in for jobs not to be to their liking.

And so we need more direct communications, and I think that's where the partnership really can help. Where we bring face to face the young sophomore in high school with the businessperson whom he otherwise won't see until he's there for the first time applying for a job. So we need to stretch that relationship beyond where it's been. In fact, it has not been anywhere. And that's, I think, the goal of a lot of the partnerships you've heard today, to open that vista, more to the businessperson than it is to the child.

Ms. ENGLISH. Anything further?

Ms. POWELL. I might just add, vocational education is a key piece where young people learn what's expected of them in the jobs that they end up in. And perhaps, some of what I see coming out of our vocational programs are some of the young people who then walk right in and secure a job because they've been taught through that process exactly what it takes for the result to be employment.

And so what we probably need to do as educators is bring more of that process in through our non-vocational classes. But what business has to remember is that the public schools have to be very careful what we say to young people because of students' due process rights. You know we cannot violate that with dress codes. In many different areas we are limited in the demands that we can set on the young people in our schools.

So it really becomes a one-on-one, where teachers mentor students, business people come into our schools and mentor students, someone takes an interest in that one student, in the way that happens in a vocational program, and says to them, "You know you're going to an interview next week, let me take a look at your resume. Do you know what a resume is?" Or, "When you go for an interview next week, I know that you don't have a lot of expensive clothing, but make sure you wear such and such that I saw you in a couple of weeks ago, because that's an appropriate dress for an interview." The young people don't know this. They truly don't know what's appropriate.

They don't know, for example, the Scottsdale—City of Scottsdale puts out a bulletin on what to do when you come to them to apply for a job that goes to the point of saying, bring a pencil. You know we need to tell our young people, these are the things that you have to be prepared for when you come in for an interview.

Mrs. UNSOELD. I'm cognizant of that clock going around, but maybe you can just give a head shake or nod, because it seems to me that the respect that you were talking about—the discipline, the readiness to learn, development of a conscience—that although not directly related to elementary, and secondary education reauthorization, it does come with early childhood education. And I just

wonder if you all feel that that is a place that as a society we need to have some greater emphasis on so that they've got that spark in their eyes when they come to school, instead of being part of the 40 percent that aren't ready to learn when they come for the first day?

I see some heads nodding.

Mr. EDWARDS. That's why big business is oftentimes holding up private schools as a model for public schools. We know you've got the liberal side of society to accommodate, but quite honestly, I think business too often thinks that we, as a society, have gone way in one direction to accommodate the individual's rights and anything goes. And then when they get into what I call a different world, all of a sudden those rules have changed.

Mrs. UNSOELD. Are you—

Mr. EDWARDS. And they find it a real struggle, but it isn't—

Mrs. UNSOELD. Are you familiar with the Committee for Economic Development?

Mr. EDWARDS. No.

Mrs. UNSOELD. CEOs of major U.S. corporations, give me your card when this is over, and I'm going to send you a copy of their publication they've done.

Mr. EDWARDS. Okay.

Mrs. UNSOELD. James Renier, the CEO of Honeywell was the chair of their early childhood education publication. I'd like to send it to you.

Mr. EDWARDS. Okay, thanks.

Ms. POWELL. And if I might add, the way that you find that children will be respectful is when you treat them with respect. And so what we insist of all of our employees is that children, even very young children, are treated with respect, that the opinions that they offer are considered valuable and that we use every opportunity as a learning experience. And when a child is treated with respect, they will respond to that person with respect, in the same way that when an adult treats you with respect, you would never consider responding with disrespect, you would always respond with respect.

So that's just a standard that we set in expecting all of our employees to treat children as if they are intelligent human beings, and they have a right to be treated with respect.

Mrs. UNSOELD. I apologize for taking more than my time.

Ms. ENGLISH. No, that's okay.

Mr. RECK. I'd just like—I'll conclude this quickly, because I want to put a plug in for one of your next speakers, Mr. Pete Guzman. And he can tell you truly how the young child, a three- and four-year-old, can change and can be enlightened and can get excited about education through some of the things he's doing with technology. And I'm not going to steal his thunder beyond that. He's got a great story here.

Ms. ENGLISH. Well I thank the panel very much for the discussion, and if you have further testimony to add, please do that in written form and we'll make sure it gets entered in the record. Thanks very much.

We're going to need some more chairs here. The next panel there are five members, Mr. Pete Guzman, Mr. Jon Engelhardt, Ms. Vangie Stewart, Mr. Brent Hulls and Ms. Diane Thorson.

There are five members on this panel. We've divided the other one-hour segments up with four members, so you will have to keep your comments to five minutes, if at all possible, so we can have a little dialogue afterwards.

Mr. Peter Guzman will be the first speaker. He's the principal of Winkelman Elementary School. He has been a classroom teacher and athletic coach for 20 years. He was active in implementing a technology in the classroom program in Winkelman which focuses on computer education for children from Headstart to the 6th grade. He is an advocate for rural education issues, yeah, and his school is involved in a community partnership with the ASARCO Mining Company. Welcome.

STATEMENTS OF PETER GUZMAN, PRINCIPAL, WINKELMAN ELEMENTARY SCHOOL; JON ENGELHARDT, EXECUTIVE DIRECTOR, CENTER FOR EXCELLENCE IN EDUCATION, NORTHERN ARIZONA UNIVERSITY; VANGIE STEWART, SPECIAL EDUCATION DIRECTOR, KAYENTA SCHOOL DISTRICT; BRENT HULLS, MEMBER, VOCATIONAL EDUCATION ADVISORY COMMITTEE, FLAGSTAFF SCHOOL DISTRICT; AND DIANA THORSON, MEMBER, VOCATIONAL EDUCATION ADVISORY COMMITTEE, FLAGSTAFF SCHOOL DISTRICT

Mr. GUZMAN. Thank you, Congresswoman English. Thank you for your invitation and this opportunity. Before I begin, I would like to say that please keep in mind as I make my comments that I speak for the rural areas. Money is limited for all schools, but for rural areas it's even more limited. We do not have the Motorolas, the Dial Corporations or other businesses you've heard that can offer school support. We don't have the luxury of grant writers or business managers. We are primarily at the mercy of our own tax base.

I'm here this afternoon to speak on, number one, to declare that putting technology in the classrooms does make a positive difference with our students; number two, to explain how a partnership with a mining company made that possible for Winkelman; number three, express a concern to you, as lawmakers, that not enough bond money, particularly in the rural areas, is being spent on technology for the classrooms; number four, ask for your consideration in passing legislation here in Arizona that requires all school districts who pass a bond election, that they target a percentage of that bond technology for the classrooms and nothing else.

I would like to present to this panel some information on what difference technology in the elementary classrooms can make. It is a success story and it is at Winkelman Elementary. It involves two scenarios, number one, our schools; number two, the ASARCO Mining Company.

In the schools, before 1992, Winkelman was having some problems that are typical in many schools, particularly the rural schools: low test scores. For years Winkelman scored lowest in Gila County. Declining enrollment since 1982, a drop of 155 elementary

students. A lot of students enrolled in the next-door district, even though they still resided in Winkelman; poor parental involvement, high absentee among teachers and students, also the feeling of working in a dying district.

The other involves ASARCO. ASARCO is one of the world's leading producers of metals, primarily copper, lead, zinc and silver, with its associated companies, together, in 1991, accounted for 13 percent of the western world mining production of copper, 12 percent silver, 13 percent lead and 9 percent zinc.

For the year ending December 31, 1991, ASARCO had over \$1.9 billion in sales, \$2.9 billion in assets, and stockholder's equity of about \$1.5 billion. Through the 1980s ASARCO quit hiring a lot of our local graduates. Technology in the mines changed the workforce. No longer were our local people guaranteed a nice job after school. They were not qualified; they were not hired.

The administration of our district, community members and ASARCO Mines decided it was time for action in our schools. We decided to make technology in our classroom a top priority. A bond election was decided to be put before the voters, \$3.5 million, \$950,000 devoted solely to technology in the classrooms. ASARCO would pay 92 percent of that bill. They did; they are.

With good cooperation of all parties, and positive, informative information to the public, the bond passed two to one. In the district now we have three servers with an extensive range of IBM software, four laser and graphic printers, four computers in each room with a computer for every five students ratio. Some have five and six computers in the classrooms. One printer in each classroom, and all using the TLC or Teaching Learning with Computer concept.

Computer labs with 25 work stations serving K through 6th. Computers in our preschools using Kidsware programs on our four-year-olds. Two computers in our Headstart, which serves the three-year-olds, also in the Kidsware program. We have a pilot program with Headstart, the only one in Arizona where three-year-olds are working on computers on a regular basis.

One of the results of the changes we have made, higher enrollment. In 1½ years of implementing these programs, our enrollment has increased by over 25 students. Now we get students from our neighboring communities. And just to give you an idea of what I'm talking about, in the flood last January we lost half of our community, yet our enrollment went up. Our Headstart program originally started with only one class, it now has two and a waiting list of 15. Our kindergarten classes, originally half-day, now have been expanded to all day kindergarten because of the interest.

Teachers fight with students to take their assigned recess, that's true. New teaching techniques have developed. Now we are using learning centers with rotations that excite students and give parental helpers a meaningful role, not just to grade papers anymore, plus increasing our parental involvement.

Parents request an extended education. Last year we extended our school for students who were interested to five extra weeks during the summer, and currently we are now looking at a year-round school.

Quality, cooperative learning techniques, have developed. Low absentee numbers for both teachers and students. Last January when half of Winkelman was flooded out, we were forced to go to school on two Saturdays. Over 95 percent of our students attended school.

Improved test results. Before we were the lowest in Gila County, last spring we took the new State test, the ASAP, Arizona Students Assessment Program, and our students scored in the areas of reading, math and writing the highest in Gila County. Higher self-esteem among our students. They're happy and smiling again.

We have had positive visitations from other school districts and educators, such as the Osborn District here in Phoenix, Madison School District, San Manuel and San Carlos. And now, instead of the feeling of a dying district, I say to you, there is a feeling of a successful school among educators, students and community members.

On closing, I just would like to add, we were lucky in Winkelman, but even for some of the schools that have visited our school, I have a feeling of concern because some other school districts have passed million-dollar bond issues and they're sad to tell me they'll never have the programs we have because they didn't spend one penny on technology in the classrooms.

I have one last request in closing, what is Mr. Frank Edwards', from Dial Corporation, phone number?

Ms. ENGLISH. Too bad he's already left.

Mrs. UNSOELD. He's gone, but he gave me his card. I'll give it to you.

Mr. GUZMAN. Thank you, very much.

Ms. ENGLISH. Thank you. Dr. Jon Engelhardt is next. Dr. Engelhardt is Executive Director, Center for Excellence in Education, Northern Arizona University. He is a former dean of the College of Education at the University of Texas at El Paso and he has served as a faculty member at Arizona State University for 16 years. He also served as an Arizona classroom teacher in mathematics and spearheaded a number of partnerships between universities and local school districts on teacher training. He helped found the Project 30 Alliance, an association of universities dedicated to corroboration efforts in teacher education.

Dr. ENGELHARDT. Thank you, very much. It's a pleasure to have the opportunity to speak with you again, Representative English, and certainly pleased to meet the rest of the members that are here. I'm especially pleased that you all have come to Arizona and have provided me an opportunity to share some of the important work being done at Northern Arizona University.

Let me explain in just one brief second of time a little bit about the Center for Excellence in Education at NAU. The mission for our center is to prepare professional educators to create the schools of tomorrow. As a result of that mission, we find it very important, if not critical, to be greatly involved with what goes on in the public schools in the State of Arizona.

In many ways Northern Arizona University is like the last grand institution in the traditional sense of the word for this State. Where you think of the agricultural agent as going out and working with the farmers to improve what's going on, we see ourselves

in many ways as having that same kind of role with the school systems of the State of Arizona. We take great pride and great joy in trying to help the schools do as good as they can, as good as we can help them do in doing their important work.

We're especially proud of the many K-12 partnerships that we have, and I'm pleased to share some of those with you this afternoon. I understand that your timeline is very tight, so besides the few comments that I'm going to share with you, I've prepared a document which briefly summarizes many of the partnerships that we have, and you should, hopefully will have, do have or will soon have a packet explaining some of those. I hope that you will take the time to look through those, there's quite a lot of variety and breadth of the different kinds of partnerships, and I hope from that you won't see just what NAU is doing, but the kinds of things that are possible in partnerships between universities and school systems.

I have included with each of those a contact person so that if anyone would wish to have any further information. For purposes of information for the audience, I've also provided copies on the table in the back for anyone, also, who might be interested. In the next few minutes, though, I do not intend to describe the very many partnerships that we have, although I will describe just a few.

But I would like to tell you that these partnerships generally fall into two types, they are professional preparation partnerships or school services partnerships. In the preparation partnerships we work together on staff development, staff preparation. In the school services partnership we work on areas that help improve school services and directly or indirectly services to children.

I would mention to you, that in the listing that you have, there are 13 professional preparation partnerships and another 11 school services-type partnerships. There are many relationships that can be called and have been characterized as partnerships. And I guess if there's any fear that I have in listening to the dialogue that I've heard today, is that the word "partnership" will become just one of those—one more of those buzz words that we hear being used to talk about any relationship that occurs between two institutional entities.

I would like to share with you that the best partnerships are those partnerships, those relationships where the parties come together as equals; each with significant and honored input to that relationship. Furthermore, those partnerships that are effective are those that come together because they have a joint commitment to a common goal and because they share a common institutional mission. Both organizations are trying to attain the same ends. And when those conditions occur, I think we see the most effective partnerships. And as I've listened to the examples that we've heard today, I think you'll find those characteristics fit almost every one of those.

Well the three partnerships that I would like to share with you, the first one of those is one that we call the Sedona Professional Partnerships, that is a professional preparation partnership. You probably, unless you're from Arizona, would be unaware that the Sedona/Oak Creek School District is a recently created school dis-

trict out of two other school districts, the Flagstaff School District and the Verde Valley School District. While that school district currently has only two elementary schools, in the near future it is establishing a third elementary school, a middle school and a high school.

Actually this partnership is a constellation of partnerships, not a single partnership, in which the Sedona School District and the Center for Excellence in Education have agreed that the university will share some of the responsibility for educating children. And the Sedona School District will share some of the responsibility for the onsite preparation of teachers, counselors and administrators. We are currently jointly hiring a staff member that is paid for by both institutional entities in an effort to move this forward.

Our current progress is one where we have begun this fall with a pre-service teacher preparation program. And, given your comments earlier, I would mention to you that in efforts to keep parents involved and informed, this coming Monday we have Parents' Day, which is not specifically designed for the children but designed for the parents of our pre-service teachers to see the kind of experiences they're going through in higher education so they can understand and support what it is that we're trying to do there.

A second partnership is—the name of it is the Bilingual Education Personnel Training Project. It also is a professional partnership. This partnership brings together the university and K-12 schools whose student populations are predominantly Native American, and they are spread out throughout the State of Arizona.

In this project teacher leaders are identified by the various schools to participate in professional development in the areas of science and mathematics instruction. In turn, those teachers are expected to promote in their own home schools more effective science and math curricula and more effective science and math instruction. In addition to receiving that training and having that expectation, they have an opportunity to pick up a bilingual or ESL endorsement to improve their competence in schools with such populations.

The third partnership that I'll mention to you is one that we call—it's actually, again, a cluster which we call School Based Research Partnerships. This is an example of a school service partnership. In those partnerships the university and schools work together to research and address specific problems identified by those schools. For example, one of these partnerships is with a problem of high school dropout that was identified with Chinle High School in northeastern Arizona. As a result of that initiative, several programs have been put in place in the area of substance abuse and teenage pregnancy.

In another partnership, example of that partnership, focused on evaluation of an innovative supplementary basic math program in the Williams, Arizona School District.

In closing, I'd like to commend the committee for acknowledging the role of higher education generally and colleges of education specifically in revamping the Elementary/Secondary Education Act. I urge you to support Representative Romers' proposed seven goals and the Goals 2000 legislation, a goal which acknowledges the im-

portance of professional development for teachers. And I would stress and hope you would continue to support the notion of having, requiring that deans of education be involved in the development of State education plans for the implementation of the Elementary/Secondary Education Act.

Thank you very much for the opportunity to share some ideas, and I'd be glad to answer any questions you might have.

Ms. ENGLISH. Thank you, very much.

Dr. ENGELHARDT. Thank you.

Ms. ENGLISH. Before we go to the next speaker, if I remember correctly, Representative Romers' goal was accepted by amendment. Do you remember that, Jolene?

Mrs. UNSOELD. I think so.

Ms. ENGLISH. And it was included in the overall package, and the Goals 2000 bill passed last week.

Dr. ENGELHARDT. Very good.

Ms. ENGLISH. So it's on its way.

Dr. ENGELHARDT. All we have to do is convince the Senate now.

Ms. ENGLISH. That's right, an easy task. The next speaker is Ms. Vangie Stewart. And Ms. Stewart is a special education director at Kayenta School District. She received both her bachelor's and master's degrees from NAU. She is a lifelong resident of the Kayenta area working with Native American children and has been working with Northern Arizona University for two years on the teacher training partnership. You have six children, I understand—

Ms. STEWART. Yes.

Ms. ENGLISH. [continuing] in the Kayenta School District, and was a special education instructor for 12 years before becoming an administrator. Thanks for being here.

Ms. STEWART. Thank you for allowing me to participate this afternoon, Representative English and members of the committee. I represent a partnership between Kayenta School District and Northern Arizona University. Kayenta Unified School District and NAU is in their second year of this partnership. This partnership is currently a federally funded project and is known as the Rural Special Education Project. Kayenta is located about 150 miles north of Flagstaff on the Navajo Reservation, and because of the isolation, the turnover rate for special education teachers is very high, especially for qualified special education teachers.

The Rural Special Education Project has provided the opportunity for the teaching assistants of Kayenta Unified School District to participate in the project. Traditional campus students are brought in from NAU, they relocate to Kayenta. Housing is provided by Kayenta School District and the campus students complete coursework, 37 hours of coursework throughout the year.

Students also complete a conpracticum of 20 hours a week. Students have also the opportunity to be culturally immersed in the—by 20 hours a week. Students have also the opportunity to be culturally immersed by individuals who live in the community. They earn 37 special education credits from NAU that is applied toward a dual major in special education and regular education.

This project allows the teacher training in a rural setting, and eventually we're hoping that the campus students or the teaching assistants who are participating in the project return to Kayenta

after they finish their program to become the teachers that we so desperately need there.

Ms. ENGLISH. Thank you, very much. The next speaker is Mr. Brent Hulls. Mr. Hulls is the owner of Coconino Auto Supply, member of the Vocational Educational Advisory Committee, Flagstaff School District. He is a product of the Flagstaff Public Schools Vocational Education Program and is active in the community in education issues. His work is to develop vocational education and job training partnerships between small businesses and the Flagstaff School District. Welcome.

Mr. HULLS. Thank you. I'd like to thank you, Representative English, for inviting me to come and share my thoughts and concerns on the issue of vocational education in the school system.

I first became involved with the issue of vocational education in high schools some 23 years ago at Flagstaff High School, where I took auto shop for two years. Then in my senior year of high school I took the work release program of DECA, Distributive Education Clubs of America. I am using the education that I received in these classes to own and purchase Coconino Auto Supply, that I was involved with since I graduated from high school.

The information that I received in my auto mechanics and DECA classes helped me to make myself and my business succeed in this world of small business. I feel that by having the opportunity of learning about the automobile maintenance and repair has allowed me to make the American dream come true, owning your own business. The fact that I could take part in the DECA program my senior year, and work at my father's store, allowed me to find out what it meant to have a job and the responsibility that comes from your job, such as being to work on time, doing the tasks that are asked of you and being consistent in daily responsibilities on the job.

Over the years I have had several students work with my business in one of the work release programs from the schools. One of these work release students is still employed part time with my business after 13 years. Through this involvement with the schools, I was asked to serve on the Vocational Education Committee, to give advice, help, and recommendations on how we can improve the vocational education process.

We have also assisted the schools in getting grants and funding for the programs that are in the schools. Over the years I have enjoyed seeing how the program has grown in areas such as the Tech 2000 labs in the junior high schools. Youths I have talked to enjoy this class and are getting some hands-on training that could lead them to an educational program in high school. Once students have experienced some of these trade areas, it gives us good opportunity to keep these youth in a field that can give them a chance to learn more about a trade that will enable future job opportunities, not lower wage and unskilled jobs.

Approximately 75 percent that graduate from Flagstaff Public Schools have a minimum of one year of classes in vocational education. In addition, 86 percent of Arizona vo-tech students graduate, compared to 63 percent of all high school students that graduate. Fifty eight percent of high school graduates start college, but of these only 12 to 15 percent get degrees. Sixteen percent of these

are vo-tech students that earn their bachelor degrees, compared to 12 percent of all students.

The vo-tech student base is growing. In Flagstaff we now have approximately 2,600 students in vo-tech classes, including approximately 1,200 students that are isolated with special needs. This was from the school year of 1992 to 1993.

This is an increase of 750 special need students, or 46 percent increase of special need students in the vo-tech department from the 1988-1989 school year. If we can keep the vo-tech field's high quality with modern equipment and good teachers, we are giving the wage earners of tomorrow a head start towards their careers and future education.

The cooperative education program also provides good opportunities for the school-to-work transition programs that allow the students to get real life experiences. This will teach the students about a trade while giving them the responsibility, such as getting to work on time, respecting their boss, working with others, how to get a job, and how to keep it.

In rural communities we are forced to use many small businesses, not large businesses. So our co-op program consists of approximately 75 employers who are employing and paying 80 students. In addition to the 80 paid students, there are approximately 20 students working in the medical field who are not paid. In order for us to continue the quality of voc-ed and co-op programs, we must continue having quality programs to keep the students' interest. With increased cost of equipment, facilities and salaries, we must continue receiving funding through grants, acts, general budgets, tax incentive credits and any other sources we can find.

We must develop agreements to share the use of facilities with our schools, colleges and businesses to keep current equipment and facilities. We can give tax credits to businesses who donate use of the facilities and equipment or hire students for the positions in their business. We must also remove the strings that are attached to many of the grants and funding programs, which will allow more of the money to go for education or equipment, not administrative costs. We can also encourage specific businesses to support a specific segment in one of the technical fields. With increased numbers of special needs of vo-tech students, we continue to need increased funding and help in the classrooms to meet these students' special needs.

In rural communities we also need increased funding because many of the fields have only a few interested students, and we are not able to offer all of these programs because of class size. Besides funding, rural communities need to make sure that these voc-ed and co-op student programs continue wherever they are. This will be possible by combining with other schools, community colleges, universities, rehabilitation programs, job services and industries. Businesses also need to be encouraged to offer training for the teachers and administrators in their specialized fields that they are involved in.

We will need to educate businesses as to what tax credits and advantages are available and how they can use them for their benefit. Government can also encourage business to locate to the rural areas where they can assist the community with some of these

areas that I have addressed. Businesses could share their facilities, equipment, train the voc-ed instructors in modern technology and/or hire students through co-op programs. This will also increase the tax base of the community and increase employment. We will also help the community by having more technologically trained students to enter the workforce upon their graduation from school.

We also need to change the status of some credits in the schools so you can achieve some required credits in the voc-ed classes. Examples of this would be math credit in the electronics program, or a lab science credit for the students in the medical field. This would allow more students to complete the voc-ed program.

I would again like to express my appreciation and thanks for listening to my ideas, thoughts and concerns. I hope that I have been able to convey the importance and need of continuing and broadening the voc-ed and co-op programs in our rural schools. Our country's future depends on how we educate our youth. Thank you.

Ms. ENGLISH. Thank you, very much. Our last speaker today is Ms. Diana Thorson, and she is owner of Interiors Unlimited, a small business in Flagstaff, member of the Vocational Education Advisory Committee in the Flagstaff School District. She has worked in the classroom as a former vocational home economics and an elementary schoolteacher. She has worked with both the Carl Perkins program and Tech Prep in the Flagstaff School District and Coconino Community College. Currently she is very active coordinating correctional and rehabilitation education programs for the Coconino County Sheriff's Department and the Arizona Supreme Court. She is also an advocate for adult education and job training. Thanks for being here.

Ms. THORSON. Thank you, Representative English and members of the panel. I really appreciate the opportunity to express my views and concerns regarding vocational education.

As I address the issues with which you are concerned today, please keep in mind that I am really looking at them from all the perspectives that you've just mentioned in my background as a vocational educator, a small business owner, a member of a rural community, a special educator, a correctional educator, and an adult educator.

I'd like to first address the challenges that affect the education environment in our rural setting. Northern Arizona is a largely rural, sparsely populated school district area and part of our State. It's the second largest geographical school district in the country, but we only have 11,000 students, or thereabout.

The needs of our students in many ways are really not any different than those of students living in urban areas. They need the academic skills necessary to be successful in the largest vocation of all, living. So they can be wise consumers, successful home managers, responsible members of the democratic process. They need academic skills, of course, for employment.

However, employment and family life require far more than just academic skills. Recent research from the Department of Corrections has shown that recidivism is not reduced by raising academic skills and acquiring a vocational trade alone. Cognitive social skills needed to get and keep a job are greatly lacking in the segment of

our population who are incarcerated, a segment that is growing faster than our ability to house them.

Along the same lines, studies among incarcerated adult alcoholics has shown that in the majority of cases social skills deficit preceded the onset of alcoholism. Those same social skills are recognized as lacking among our unemployed as well, where alcoholism is also a major issue. A recent needs assessment, taken among Flagstaff's adult community, named parenting skills as the greatest need of all areas of adult education. These skills traditionally fall within the category of vocational education. Education as a whole must prepare its students for the vocation of family life and vocationally appropriate employment.

What of vocationally appropriate employment, when only 12 to 15 percent of a college freshman class completes the four-year degree program, it appears that we are sending too many students to college who shouldn't be there. When only one out of five jobs requires a college degree, we need to ask ourselves if we are not off target in our educational emphasis of an academic track for the majority of students.

In Flagstaff we are sending 58 percent of our graduates to college, and returning 36 percent to the workforce with no employment skills within a year or two. We are sending another 30 percent of our graduating seniors directly into the workforce with no skilled training. Of the 10 percent of the seniors who are vocational program completers, 16 percent earn a bachelor's degree. Those vocational program completers who did not acquire a bachelor's degree are at least vocationally skilled.

The answer to fully preparing students of the middle majority for the role of productive citizen and taxpayer has got to be vocational work-related education. This not only involves applied academics, but on the job training partnerships with business and industry in the form of equipment and staff development and partnerships with community colleges. What sets rural areas apart from urban areas in providing this broad educational experience to its students is the lack of opportunity students have for combining employment skills with their academics. There are few businesses or industries with whom to form partnerships.

In Flagstaff the Cooperative Education Program cannot find jobs for all of its students. If schools are going to have business partnerships in rural areas, it will involve mostly small businesses. But there is little motivation for small businesses to form such partnerships.

Flagstaff's Cooperative Education Program works with approximately 80 out of 900 senior students who are employed by 75 employers. With tourism and hospitality our major industry, the lowest paid industry with the highest employee turnover, you can see where the majority of the students find jobs. It's interesting to note that not one native American living on the Reservation is involved in our co-op program.

The positive benefits for students in cooperative education is the same in rural areas as in urban areas. It affords the opportunity to apply academics. It teaches the value of the work ethic; a sense of responsibility is felt in the work community; problem-solving

skills, communication skills, the need to follow-up and follow through, and an appreciation of the free enterprise system.

The exposure may be open, may open or close the door on a potential career path, depending on the experience. Most importantly, we are keeping students at risk of dropping out, in school. The downside in the rural community is that few students become a permanent part of our workforce. If they do, that training spot is closed for a future student. We are virtually training our students to work in the Phoenix area, but we have no partnerships with businesses in the Phoenix area.

I alluded to the fact that partnerships are hard to come by. Unless a small business owner is purely civically minded and benevolent, forming a working partnership with a school has to be perceived as advantageous to the profitability of the business. However, it is time consuming to train and supervise these students who usually move on to something new in a year. I see a majority of rural businesses barely squeaking out a living. For many, to form such a partnership is simply not cost effective.

In the past I have been able to employ students in a retail camera store. That type of operation lends itself to training students with relative ease and tailor the training to the ability of the student. However, with my present business, an interior design and home furnishing business, the technical skills needed allow me no margin for error. I simply can't risk it. I feel that the Flagstaff school system is doing what they can to form partnerships with the community.

The Vocational Advisory Committee is made up of parents and business people in Flagstaff and all parties are kept informed on trends and issues. The HomeCo company has formed a partnership with Dewalt Tools, and through cost sharing has provided the building trade program with tools. Though an emphasis in tech preparation as opposed to college preparation, Coconino County Community College and the public schools have formed a partnership to articulate courses in the area of accounting, computer-aided drafting, construction trades and health careers. And I might add that the Coconino Community College students actually are on the training site at Flagstaff High School working on the house that they're building together. Commercial food preparation and automobile mechanics are being looked at for the future.

The heart of a successful vocational program is governmental support; funds channeled to programs that give students the most for our money.

Here are some concrete suggestions: Simplify the accounting process, the accountability process. As a Carl Perkins evaluation coordinator, I was only too aware that my salary was using up grant money that could have been more directly applied to the students. In fact, close to half of our grant money is used to meet the standards of the grant. Tracking the program completers from the class of 1993 is going to be an expensive project in terms of time, energy and money.

Leave the evaluation of a program to the local education agency; develop incentives to achieve excellence through simple new program and staff development grants, not necessarily competitive grants, such as release time for community service would be appro-

prate tax incentive for a company to get involved within a school district; give recognition to programs that are innovative or particularly successful so that they become a model for others to follow.

Two, recognize the uniqueness of the rural population. Support small class size when the district cannot come up with the funds. Too many students are denied access to advanced level vo-tech classes because there aren't enough students to make a class of 15. Students must not be cheated out of their once-in-a-lifetime opportunity to become a program completer just because there weren't enough students to create the program.

Help rural areas create a better population base by uniting bodies of students together through interactive television and computer systems. The benefits of this approach are far reaching, from preschool to adult education. Staff development, which is sorely neglected in rural areas, could be greatly enhanced through satellite downlinks and uplinks.

On the subject of staff development, keep in mind how poorly teachers are paid. Continuing education to stay current in the field often comes out of their own pockets. Staying current with the technology is a nightmare. Offer them tax incentives. Put the summer months to use with continuing education.

Three, be aware of the high percentage of special populations and at-risk students involved in vocational programs. Fund them from the special education resource accordingly. Flagstaff's special education population count in vocational classes is up to 45 percent. And the unfortunate part is the pupil/teacher ratio is going higher. Vocational hands-on classes require more individualized attention. The larger the class size, the more special the students, the more nonproductive student time.

Four, support applied academics. Many students absolutely need to have hands-on experience to learn. And, as a matter of fact, that's the way that most of us all learn much better. Tear down the walls of certification so that students can receive college credit for an articulated community college course while still in high school without requiring a certified community college teacher. Allow students to cross credit. There is no reason that the nursing student should not receive a laboratory science credit or the digital electronic student should not receive a credit for Algebra I without duplicating those courses. This is a far better way to monitor basic and advanced skills in vocational classes than giving pre-tests and post-tests as the Carl Perkins grant specifies. This will also open up enrollment for more students to take advance courses, graduating from high school with at least entry-level skills.

These appear to be State curriculum issues, but I think the Federal Government can be influential in the process.

Five, centralize and utilize vocational laboratories. It is far too expensive to duplicate laboratories when it's not necessary. Most laboratories should have 80 percent usage, day and evening. The government must offer incentives for partnerships. Support articulation between community colleges and the high schools. Consider developing regional vocational schools in rural areas. We can almost predict that today's graduate will need to be retrained twice in his or her lifetime due to technology and the rapidly changing

job market. Such a training center will encourage lifelong learners and high school students to learn together. It is working now in Los Angeles in the public high schools very well.

Six, help change public attitudes towards vocational education. Take a good look at Dale Parnell's concept of a college preparation track and tech preparation track in high school. There are a number of models in operation now that have had excellent results in terms of dropout rates and student success.

Seven, support cooperative education programs in rural areas. Provide tax incentives for the small profit-making business to form partnerships with schools for on-the-job training. Allocate a stipend such as a wage sharing or a flat amount for a small break-even business to form a partnership. Even minimum wage is more than small businesses can afford. If a co-op student becomes a permanent part of the business, provide a stipend to keep a training slot open.

Eight, provide tax incentives for business and industry to locate in rural areas. Enterprise zones with diversified industry can help provide training sites for high school students and employment for the unemployed. Northern Arizona has a lot of land to spread them out before the profile of the area would begin to look urban.

Nine, provide tax incentives for creative partnerships between business and industry. Cost sharing or providing up-to-date equipment is essential. Adopting instructional modules that bring the most current information directly into the classroom is time that can be compensated for in tax incentives. Providing student transportation to a remote jobsite or remote living location is worth a tax incentive.

In summary, in rural Northern Arizona people are making a sacrifice to live where they think the quality of life is the highest. Wages are lower than in the urban areas and the cost of living is considerably higher. What must not be sacrificed is the quality and opportunity of education. Thank you, very much.

[The prepared statement of Ms. Thorson follows:]

STATEMENT OF DIANA THORSON, MEMBER, VOCATIONAL EDUCATION ADVISORY COMMITTEE, FLAGSTAFF SCHOOL DISTRICT

As a resident of Northern Arizona, I want to thank you for this opportunity to express my views and concerns regarding vocational education. As I address the issues with which you are concerned today, please keep in mind that I am looking at them from the perspective of a resident of a rural community and small business owner, with a background as a vocational educator, a special educator, a correctional educator, and an adult educator.

I would like to first address the challenges that affect the education environment in our rural setting. Northern Arizona is a largely rural, sparsely populated part of our State. Flagstaff is the second largest school district in geographical size in the continental United States. The needs of our students in many ways are not any different than those of students living in urban areas. They need the academic skills necessary to be successful in the largest vocation of all—living, so they can be wise consumers, successful home managers, responsible members of the democratic process. They need academic skills necessary for employment.

However, employment and family life require far more than academic skills. Recent research from the Department of Corrections has shown that recidivism is not reduced by raising academic skills and acquiring a vocational trade alone. Cognitive social skills needed to get and keep a job are greatly lacking in the segment of our population who are incarcerated, a segment that is growing faster than our ability to house them. Along the same lines, studies among incarcerated adult alcoholics has shown that in the majority of cases, social skills deficit preceded the onset of alcoholism. Those same social skills are recognized as lacking among our unem-

played as well, where alcoholism is also a major issue. A recent needs-assessment taken among Flagstaff's adult community, named parenting skills as the greatest need of all areas of adult education. As you look at the numbers of troubled teens nationwide, this should not come as a big surprise. These skills traditionally fall within the category of vocational education. Education as a whole must prepare its students for the vocation of family life and vocationally appropriate employment.

The vocation of family life is perhaps a State curriculum issue, but one close to my heart as I once taught it. I cannot help but interject a pitch for inclusion of such a curriculum at a time in history when the quality of family life in this country has seriously deteriorated.

What of *vocationally appropriate employment*? When only 12-15 percent of a college freshman class completes the four-year degree program, it appears we are sending too many students to college who shouldn't be there. When professor after professor at NAU states that they have had to lower their passing standards further and further over the last 25 years, we must be expecting that larger volumes of students who should be doing something else, need to have college degrees. When only one out of five jobs requires a college degree, we need to ask ourselves if we are not off-target in our educational emphasis of an academic track for the majority of students.

In Flagstaff, we are sending 58 percent of our graduates to college, and returning 36 percent to the workforce with no employment skills within a year or two. We are sending another 30 percent of our graduating seniors directly into the workforce with no skilled training. Of the 10 percent of the seniors who are vocational program completers, 16 percent earn a bachelor's degree (versus 12 percent of all students). Those vocational program completers, who did not acquire a bachelor's degree, are at least vocationally skilled. In Arizona, 86 percent of the students in a vocational program complete high school, compared to 68 percent of all students. The majority, the middle majority, statistically ends up in the workforce before or within a year of high school graduation, ready or not.

The answer to fully preparing the students of the middle majority for the role of productive citizen and taxpayer has got to be vocational work-related education (or school-to-work transition programs). This not only involves applied academics, but on-the-job training partnerships, partnerships with business and industry in the form of equipment and staff development, and partnerships with community colleges.

What sets rural areas apart from urban areas in providing this broad educational experience to its students is the lack of opportunity students have for combining employment skills with their academics. There are few businesses or industries with whom to form partnerships. In Flagstaff, the Cooperative Education Program cannot find jobs for all of its students. If schools are going to have business partnerships in rural areas, it will involve mostly small business, but there is little motivation for small businesses to form such partnerships.

Flagstaff's Cooperative Education Program works with approximately 80 out of 900 senior students who are employed by 75 employers, the school district themselves employs 5. There are 20 students on job sites in Health Careers, however, those students are not paid. With tourism and hospitality our major industry, the lowest paid industry with the highest employee turnover, you can see where the majority of the students find jobs. It is interesting to note that not one Native American living on the Reservation is involved in the Co-op program.

Unique to other rural areas of this Nation, our Native American population has strong ties to their homeland. Traditionally, all rural communities have the problem of keeping their high school graduates in their community because of lack of employment opportunities. Native Americans do stay, but unemployment is disproportionately high. This is so not necessarily because of lack of education or skills, but for lack of opportunity for local employment.

The positive benefits for students in Cooperative Education is the same in rural areas as in urban areas. It affords the opportunity to apply academics while being gainfully employed, it teaches the value of the work ethic, a sense of responsibility of self and the work community, problem-solving skills, communication skills, the need to follow-up and follow through and an appreciation of the free enterprise system. The exposure may open or close the door on a potential career path, depending on the experience. Most importantly, we are keeping students, at risk of dropping out, in school. The downside in the rural community is that few students become a permanent part of our workforce. If they do, that training slot for future students is lost.

I alluded to the fact that the partnerships are hard to come by. Unless the small business owner is purely civically minded and benevolent, forming a working partnership with a school has to be perceived as advantageous to the profitability of the

business. On the surface it may seem that to employ a student to take care of some of the more menial tasks might free sales staff and management up to focus on sales and problem-solving issues. However, it is time consuming to train and supervise these students who usually move on to something new in a year. I see a majority of rural businesses barely squeaking out a living. For many, to form such a partnership is simply not cost effective. In the past, I have been able to employ students in a retail camera store. That type of operation lent itself to training students with relative ease, and to tailoring the training to the ability of the student. We could get as technical as the student wanted. However, with my present business, an interior design/home furnishings business, the technical skills needed allow for no margin for error. I have even found that college students seeking field experience is not cost effective for me.

I feel that the Flagstaff School System is doing what they can to form partnerships with the community. The Vocational Advisory Committee is made up of parents and business people in Flagstaff, and all parties are kept informed on trends and issues. The HomeCo Company has formed a partnership with Dewalt Tools, and through cost sharing, has provided the Building Trades program with tools. Though an emphasis in Tech-prep (as opposed to college prep), Coconino County Community College and the public schools have formed a partnership to articulate courses in the areas of accounting, computer-aided drafting, construction trades, and health careers. Commercial food preparation, and automobile mechanics are being looked at for the future.

The heart of a successful vocational program is governmental support—funds channeled to programs that give students the most for our money. Here are some concrete suggestions:

1. Simplify the accountability process.

As a Carl Perkins Evaluation Coordinator, I was only too aware that my salary was using up grant money that could have been more directly applied to the student. In fact, close to half of our grant money is used to meet the standards of the grant. Tracking the program completers from the class of 1993 is going to be an expensive project in terms of time, energy and money.

- a. Leave the evaluation of a program to the local education agency.
- b. Develop incentives to achieve excellence through new program and staff development grants, not necessarily competitive grants.
- c. Give recognition to programs that are innovative or particularly successful so that they become a model for others to follow.

2. Recognize the uniqueness of the rural population.

a. Support small class size when the district cannot come up with the funds. Too many students are denied access to advanced level vo-tech classes because there are not enough students to make a class of 15. Students must not be cheated out of their once-in-a-lifetime opportunity to become a program completer, just because there weren't enough students to create a program.

b. Help rural areas create a greater population base by uniting bodies of students together through interactive television and computer systems. The benefits of this approach are far reaching, from preschool to adult education. Staff development, which is sorely neglected in rural areas, partly because of the logistics of getting to a training site, could be greatly enhanced through satellite downlinks and uplinks. With the ITT and Bell Telephone merger, there is no limit to the possible networking.

c. On the subject of staff development, keep in mind how poorly teachers are paid. Continuing education to stay current in the field comes out of their own pockets. Staying current with the technology is a nightmare. Offer them tax incentives. Put the summer months to use for continuing education. We are in the midst of the "age of lifelong learning."

3. Be aware of the high percentage of special populations and at-risk students involved in vocational programs.

Fund from the special education resource accordingly. Just five years ago, Flagstaff's special population count was only 14 percent in vocational classes. Today it is 45 percent, and the pupil/teacher ratio is higher. Vocational hands-on classes require more individualized attention. The larger the class size, the more special the students, the more nonproductive student time.

4. Support applied academics.

Many students absolutely need to have hands-on experience to learn and it is a fact that all of us learn better that way.

a. Tear down the walls of certification so that students can receive college credit for an articulated community college course while still in high school, without requiring a certified community college teacher.

b. Allow students to cross credit. There is no reason that the nursing student should not receive a lab science credit, or the digital electronics student should not receive a credit for Algebra I. This is a far better way to monitor basic and advanced skills in vocational classes than giving pre-tests and post-tests. This will also open up enrollment for more students to take advanced courses, graduating from high school with at least entry-level skills.

These appear to be State curriculum issues, but I think the Federal Government can be influential in the process.

5. Centralize and utilize vocational labs.

It is far too expensive to duplicate labs when it is not necessary. Most labs should have 80 percent usage, day and evening. The government must offer incentives for partnerships.

a. Support articulation between community colleges and the high school.

b. Consider developing regional vocational schools in rural areas. We can almost predict that today's graduate will need to be retrained twice in his or her lifetime due to technology and the rapidly changing job market. Such a training center will encourage lifelong learners and high school students to learn together. It is working now in Los Angeles in the public high schools very well.

6. Help change public attitudes toward vocational education.

Take a good look at Dale Parnell's concept of the college-prep track and tech prep track in high school. There are a number of models in operation now that have had excellent results in terms of dropout rates and student success. The wage scale of the technical trades is quite likely to surpass that of the college graduate. We need to return to an attitude of appreciation for the skilled trades.

7. Support Cooperative Education programs in rural areas.

a. Provide tax incentives for the small profit-making business to form a partnership with schools for on-the-job training. The job attaining and job holding skills have lifelong importance.

b. Allocate a stipend, such as a wage sharing or flat amount, for the small break-even business to form a partnership. Even minimum wage is more than small businesses can afford. If a co-op student becomes a permanent part of the business, provide a stipend to keep a training slot open.

8. Provide tax incentives for business and industry to locate in rural areas.

Enterprise zones with diversified industry can help provide training sites for high school students and employment for the unemployed. Northern Arizona has a lot of land to spread them out before the profile of the area would begin to look urban.

9. Provide tax incentives for creative partnerships between business and industry.

a. Cost sharing or providing up-to-date equipment is essential.

b. Adopting instructional modules that bring the most current information directly into the classroom is time that can be compensated for in tax incentives.

c. Providing student transportation to a remote jobsite or a remote living location is worth a tax incentive.

In summary, in rural Northern Arizona, people are making a sacrifice to live where they think the quality of life is the highest. Wages are lower than in the urban areas and the cost of living is considerably higher. What must not be sacrificed is the quality and opportunity of education.

Ms. ENGLISH. Thank you. Jolene, would you start?

Mrs. UNSOELD. Go ahead.

Ms. ENGLISH. Well, let me get back to my question about parental involvement. Would each of you talk briefly about how you see that we can trigger parental involvement in developing these partnerships. Then please talk about the difficulty in the rural environment, because it's a little bit different. Would you like to start out?

Mr. GUZMAN. I'm not quite sure exactly what you mean by parental involvement in the partnership. Now are we talking about with the schools?

Ms. ENGLISH. With the schools. You talked about a program that is between ASARCO and the school district?

Mr. GUZMAN. Right.

Ms. ENGLISH. And one of the things that I think will make all of these partnerships more successful is the role the parent plays, whether it's becoming educated that a partnership exists or assisting the student in—

Mr. GUZMAN. I am here because I'm totally convinced technology, we're not looking at it closely enough in the classrooms. In the past we didn't have parental involvement as we now have it with technology in the classrooms. In the past parental involvement was totally different. Come to school, help out grade papers or this or that. The way technology has changed my classrooms is now we have learning centers instead of lining the students in rows, and the students meet in centers and they rotate every 15, 20 minutes. So what that does is create excitement in the classroom. Parents come to class and they get involved in these centers to where they're actually doing some teaching. They want to come to school because they're not just sitting off in one corner.

It's easy for me to get a parent up to my school now because, whereas in the beginning there was a fear of the computers, there isn't anymore, and they can't get enough of it. Just the fact of putting computers in our schools has made a total difference. Parental involvement, student interest, I don't have a problem. I pick up the phone and I need a parent for whatever, and they're there now.

Ms. ENGLISH. So just by nature of the change it triggered an involvement then?

Mr. GUZMAN. Yes. Just the change in the environment and the school through the technology has brought up the parental involvement 100 percent from my schools.

Ms. ENGLISH. That's great. Thank you.

Ms. THORSON. Representative English, I would like to have you take a look at Kilup School in Flagstaff. Dr. Karen Carroll has done a phenomenal job in bringing that community together. And in her particular area she was not only concerned with parent involvement, but parent literacy. And what she has done is to develop a family literacy center within her school, and she's working closely with the Ponderosa Headstart.

She has set aside a classroom in her school that has a sofa, and it makes it look like a living room because some of these people have no clue what a nice homey living room can look like. They're living in a small home with two or three families living together in one small home. And she is really a pioneer in Flagstaff with this model. She's done this through a lot of grants; it's not just one grant. She's got a homeless portion to it, and homeless would be defined as anybody not living in their own home. It could be a motel or with another family. And they've identified a number of families, up into the thirties, I think, within her school in that area.

But that's how she's been getting parents involved, particularly parents whose educational level is low or they may be an ESL family. Those are the parents that have a hard time coming to the schools, because they're intimidated by it. And by doing this, boy, she has really opened up that school, and it's buzzing. It's really a fantastic thing. If you get a chance to get up there, it's worth a visit.

Ms. ENGLISH. You know what's so interesting about this is comparing the type of support and programs that are needed for the schools that we're talking about with the programs and interests of a much wealthier community, like Scottsdale. It's interesting to me that some of the areas would be fortunate just to even have computers, let alone be using those computers for learning something that Dial Corporation would use. And what a broad variety of needs we have just within one small State.

I would like to take a look at that school and see what she's doing with homeless. That's such a stark difference from the gentleman from Dial Corporation whose expectations are in how a student would dress to come to the interview and the level of computer knowledge. It's pretty amazing.

Ms. THORSON. I was at a meeting with Dr. Carroll just yesterday, and this next week, it may even be Monday, she's having this open house for all these people that she has no idea who's going to come. She's identified 30-some families.

Ms. ENGLISH. Is it this Monday?

Ms. THORSON. Yes, I believe so. So it should be interesting to see how many families do show up at this project. But I think that's probably—the family literacy issue, I think is a big issue, because that gets the whole family involved in education, and it validates it.

Ms. ENGLISH. Thank you.

Mr. HULLS. I think another area that you can address to get the family more involved is just increase communication. Because it's so hard a lot of times to get information out of the—out of your children when they get home from school, if they have something, if they could have help with. And so again, I think the news media could help with that, you know, make times available and just allow the parents to really get involved. If parents know about it, there's a lot of them out there that will, and encourage the ones that aren't involved to get involved; other parents can do that, and also employers can.

Ms. ENGLISH. I cleaned out my son's backpack and not only did I find very old, dry, brown sandwiches and banana peels, but information letters that I should have gotten about a year ago. So I can relate to this.

Mr. HULLS. Thank you.

Ms. STEWART. Being on the Reservation, parental involvement is difficult, but parents do try to come in. One of the things that we have to work with is some of the kids are bussed about 50 miles out, so some of the kids are on the bus maybe 100 miles a day, each day. And when you're talking about parental involvement, you're talking about kids getting up in the morning about 5 a.m. to meet the bus while the parents make sure that their child is on the bus. Kids get home about, well we're on daylight savings time, so the kids probably get home about 5 p.m. or 6 p.m.. Pretty soon it's going to be getting dark soon.

When we want parents to come in, one of the things, as special education director, we require a lot of parental involvement. And we—if the parents are unable to come in, we go out to the home. We have a liaison that goes out to the home and brings the parent in, if that's what needs to happen. I know at the primary school

the principal does require that the teachers make at least two parent contacts, you know, throughout—from the time the school starts in August to December, at least two parent contacts.

We do have activities that try to bring in the parents, and it does work, but yet, you know; you have to think about the location, the roads that the parents have to come in on, and some of the parents aren't able—don't have transportation to come in, and you know, we do what we can.

Ms. ENGLISH. I don't know if the question is as relevant for you, but if you've got a response, I'd like to hear it.

Dr. ENGELHARDT. No, it certainly pertains a little differently, but I do have three thoughts that I'd like to share with you. One of those is, we heard mentioned earlier about Motorola sharing some time of their employees and working in schools. Sandia Labs in New Mexico have a very powerful program where they have their highest engineering types spending time in schools trying to be role models for science and math careers in particular.

It seems to me that through tax incentive or simply through an appeal to public service, I tried to catch our friend earlier from the Chamber of Commerce and couldn't seem to quite connect with her, saying if there's one thing that the Chamber of Commerce could do is to encourage those businesses they could to provide time for their employees to participate, if you will, on company time in their own child's education. That can be participating in the school or it can be sitting down and reading a book with their own child. And trying to say that's something that we value as a society, and if we can't value it without doing it through the company encouragement, then let's do it with company encouragement. That's one kind of thing that I think can be done.

This is a very radical idea, but since we're in this kind of forum, let me throw out a radical idea. Suppose we were to raise taxes for schools by \$200 per year, but allow members of the community, not necessarily just parents, to earn back that \$200 tax increase through service in schools or service with children. So that we would provide a kind of—those people who didn't want to get involved would end up paying more money, which in turn would provide better services in the schools, those who are willing to provide the services would, in fact, be helping the schools and their own children. It's kind of a strange idea, and I'm not sure if we might create more bureaucracy in trying to keep track of it than actually we'd gain out of it, but at least it's a thought worth thinking about.

A third idea is the notion of somehow providing in partnerships with a variety of community and government organizations, I guess what I'd call tutorial centers. Frequently churches take the lead in this kind of a process, but churches that are located near schools, and they provide the facility for members of the community. Our students from teacher education programs and university students generally, high school students or elementary children, retired adults that are willing to spend some of their time working with children after school hours trying to assist them in learning better how to read and in working with parents of those children.

I think if we know one thing about children who can't learn to read, frequently it's their parents who also don't know how to read. So we need to think of these programs and try to work volunteer

programs with parents saying to parents, we want to help you learn how to read so your children can learn how to read.

Anyway, those are three ideas that might relate to partnerships that might move us all forward in terms of parental involvement.

Ms. ENGLISH. Thank you, very much. I am very skeptical of tax increases.

It's a great idea.

Mrs. UNSOELD. But I think that rebate makes—

Ms. ENGLISH. It's the rebate that looks so good.

Dr. ENGELHARDT. It's which language you pay attention to, tax or the rebate.

Ms. ENGLISH. We have about five minutes. Do you have a quick question you'd like to ask?

Mrs. UNSOELD. No, I would just express my appreciation for being here and hearing the ideas that have come from this community. I think probably one of the benefits to us, and you may all not realize how you have contributed to it, is that you stiffen our backbones so that when we come back, we can help fight for some of the things that you have taught us about. So this has been a learning center for me today also. Thank you.

Ms. ENGLISH. I would especially like to thank this panel, because they experienced what I have to experience every week, and that is a lot of travel to just get your opinion heard. I very much appreciate you all having driven as far as you did to come to testify. Perhaps our next congressional hearing will be a little closer to your community, and I'm going to apologize for only being able to get one.

I do need to thank Chairman Ford who chairs the Education and Labor Committee for allowing us to have a formal congressional hearing, he's not here. And Chairman of the subcommittee, Kildee, Representative Kildee, for supporting this also. They both will be receiving all the testimony that we've heard today, and they were very gracious to allow this to take place today.

There were a number of people who were not able to come who will be sharing their thoughts in written form. I have a list of them here at some point. Well Lisa Graham, who could not attend today, who also is involved with the State legislature level, will be submitting some comments. Diane Bishop, Mayor Paul Johnson also wanted to include some comments, the mayor of Phoenix, and I think that may be all. Oh, we also asked ABLE to participate today and they were unable to do that.

So I'd like to thank Mr. Jeff McFarland for being here today. He is from the subcommittee staff in Washington, DC, and we made him come from grey skies to grey skies to participate. Thank you, Jeff.

And I'd like to thank the Mesa School District for allowing us to use this boardroom and graciously appreciate the time that they gave us. And finally, I'd like to thank my staff, both in the Mesa office and the Washington office, for pulling this all together, and all of you for participating in what I think is very informative and needed dialogue in reforming our education. So, I thank you and the meeting is adjourned.

[Off the record.]

Ms. ENGLISH. I'd like to add for the record, this will remain open for two weeks if you have additional information.

[Whereupon, at 5 p.m., the subcommittee was adjourned.]

[Additional material submitted for the record follows.]

STATEMENT OF OWEN W. LAYTON, PAST CHAIRMAN, STATE COUNCIL ON VOCATIONAL EDUCATION

Members of the committee:

The Arizona State Council on Vocational Education, in its annual report, recommended continued efforts requiring the integration of curriculum between vocational and academic education in both the Carl Perkins II Act, and in the Elementary and Secondary Education Reauthorization. This recommendation was presented to the Arizona Congressional Delegation in June of this year.

Since that time, the Arizona Department of Education has completed the assessment activities required in the Carl Perkins Act to determine the goals for the State's Vocational Technological Education State Plan. Goal number one is to "Increase the integration of academic skills in vocational education programs."

We strongly recommend that your committee take advantage of this opportunity to add language to the Elementary and Secondary Education Reauthorization that would require the integration of Academic and Vocational Education. Our council firmly believes that it will require integration from Academic to Vocational Education as well as Vocational to Academic Education to make a significant change in making educational curriculum meet the needs of today's workforce.

Thank you for this opportunity to provide input to the Committee on Education and Labor.



ARIZONA CENTER FOR VOCATIONAL/TECHNOLOGICAL EDUCATION

October 15, 1993

House of Representatives
Committee on Education and Labor
C/O Representative Karen English
2181 Rayburn House Office Building
Washington, DC 20515-6100

Members of the Committee:

From experience in both the private sector and public education, any and all federal legislation which seeks to reform education and implement job training should:

- * Use the existing vocational-technical education infrastructure.

The nation already has 16,000 high schools which offer vocational courses on a limited scale; 225 vocational high schools that offer complete academic and vocational programs; approximately 1,900 area vocational training centers that offer specific training; and 1,200 community, technical, and two-year colleges offering occupational and academic transfer programs.

- * Use existing public vocational-technical education schools for preemployment and supplemental training under School-to-Work Opportunities Act.

Industry expects students to have skills before moving them to the worksite.

- * Institute fundamental change in the practice of education and federal funding priorities.

While initiatives such as the "School-to-Work Opportunities Act" lead in an excellent direction, funding is inadequate to get the job done.

- * Focus on both strong academic and specific skill training.

Once again, bills such as School-to-Work and Goals 2000 are saying the right things: students need and will benefit from both rigorous academics and skill training. History tells us, however, that education practitioners when left on their own will concentrate on college-bound academics and give only lip service to skill training. Furthermore, for School-to-Work to be successful, the

1900 West Thomas Road Phoenix, AZ 85015 (602) 254-2865 FAX (602) 254-4512

support system for teacher training, state administration, and mentor training must be in place.

- * Develop "Workplace readiness skills" (such as those in SCANS) which are essential in skill training.

Today's workplace requires people with the leadership, teamwork, and communications skills to participate in task-diversified manufacturing services, and high quality systems. Vocational student organizations (VSO (such as VICA)) have proven successful in developing these skills in students of all ages and backgrounds, including apprenticeship programs. There is a precedent for federal support of VSO's. Ensure that VSO activities and leadership are fundable under the School-to-Work system.

- * Develop "Occupational Clusters" only if they lead to real jobs.

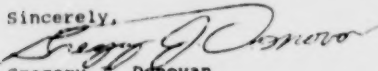
It is understandable that clustering of academics and some aspects of skill training could and should be grouped as proposed in Goals 2000. However, clustering of occupational training begun in the 1960s failed at job training. Clusters were too broad and vague. Students still were not employable based on their skills. A balance is possible so students' future employment options are open and still give them specific training so they can employed.

- * Institute National training standards that are industry-driven and continually updated to insure industry involvement.

If standards are prepared by government and education officials, they won't be used. If industry isn't kept involved on a continual basis in standard revision and evaluation, the academic and skill standards prepared under Goals 2000 and implemented under School-to-Work will be "standards in name only".

Support Vocational Education! It has the capability to provide the United States of America with a highly trained work force ready to work in the 21st Century. The federal government has the ability to Secure this with support and some changes to "School-to-Work Opportunities Act," "Goals 2000: Educate America Act," and "The Elementary and Secondary Education Act".

Sincerely,


Gregory J. Donovan
Curriculum Specialist

- * Facts, statistics provided by Youth Development Foundation of VICA.



ARIZONA CENTER FOR VOCATIONAL/TECHNOLOGICAL EDUCATION

October 15, 1993

House of Representatives
Committee on Education and Labor
C/O Representative Karen English
2181 Rayburn House Office Building
Washington, DC 20515-6100

Dear Committee Members:

I am writing to supply you with information that your committee could find useful in its deliberations on funding for support of elementary and secondary education. I work for Northern Arizona University's Arizona Center for Vocational Technological Education (ACVTE); the organization is charged with the mission of providing technical assistance through inservice activities for middle school and secondary vocational teachers. ACVTE is grant funded through the Carl Perkin's II Act. In the past two years alone, the Center has provided professional development inservice activities to more than 3000 educators in Arizona.

Our audience consists of vocational educators and/or academic educators who are involved in the Tech Prep initiative. As part of our planning process for each year's activities, the Center surveys Arizona teachers, district vocational directors, and Arizona Department of Education personnel to determine inservice needs. Copies of the survey results are included with this letter. An overwhelming need to continue our inservice activities showing how to integrate academics into vocational programs was expressed by educators.

Vocational teachers are charged with the responsibility to educate students who in many circumstances can not succeed in the traditional academic classroom. Basic skills, social skills, and interest/motivation are often lacking that impair a student's chances for success in the classroom. Because of these deficiencies, vocational teachers present information through delivery methods tailored to the learning styles of their students. Youth that need more practical applications to understand theoretical concepts succeed in vocational programs in which they experience learning through "hands-on practical experiences". Students are not pigeon-holed into paper-pencil, rote learning exercises that are found in the traditional classrooms. Academics are presented in job related experiences. That is why vocational education is a viable alternative for these students.

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This concept was highlighted by the NBC Tom Brokaw's Evening News Program that airs at 5:30 PM in Phoenix. On October 14, 1993, a national model school, Dauphin County Technical School in Harrisburg, Pennsylvania was spotlighted for its teaching methodologies. This school used academic teachers to teach applied academics in the vocational laboratories. Students learn the practical applications of the academic subjects. Five years after graduation, the school reports a 96% rate of employment of its graduating students.

Because of the changing demographics of our society, more students will require services and programs such as this. The academic educational system will need to adapt to those students; it can learn some valuable lessons from vocational educators who have already been serving these students. The fusion of both academics and vocational education will produce the highly skilled workers needed for the 21st Century. Included with this letter are copies of pertinent articles that highlight vocational education's role in preparing students for the workforce of tomorrow.

Thank you for allowing me to share some information concerning the focus of vocational education and its commitment to students.

Sincerely,



Susan R. Cooper, Instructional Program Coordinator
Northern Arizona University
Arizona Center for Vocational Technological Education

Enclosures

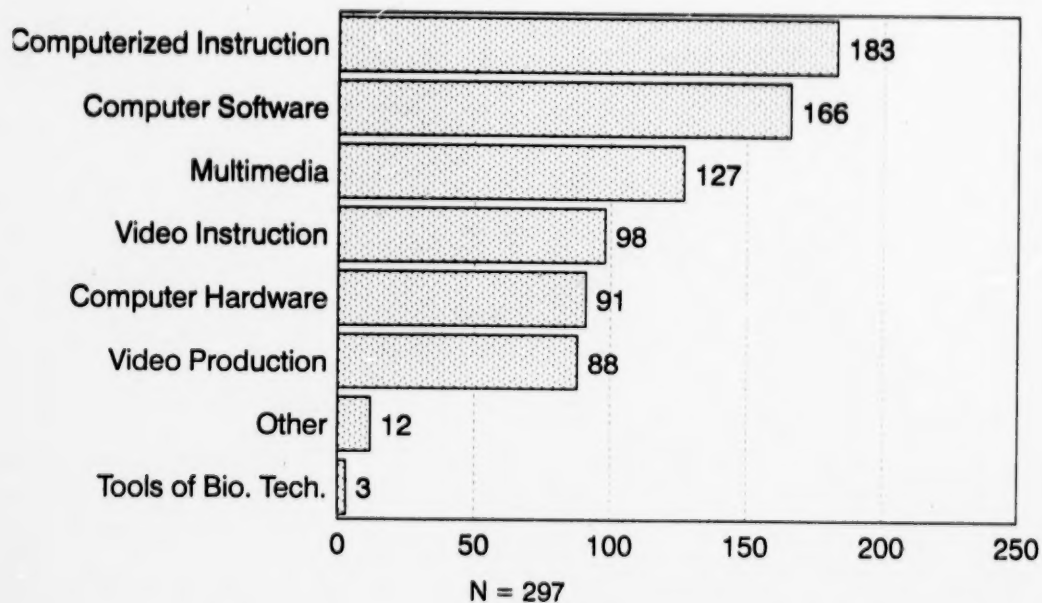
Assessment of Professional Development Needs By Teachers

August, 1993

*Arizona Center for Vocational Technological Education
Northern Arizona University*

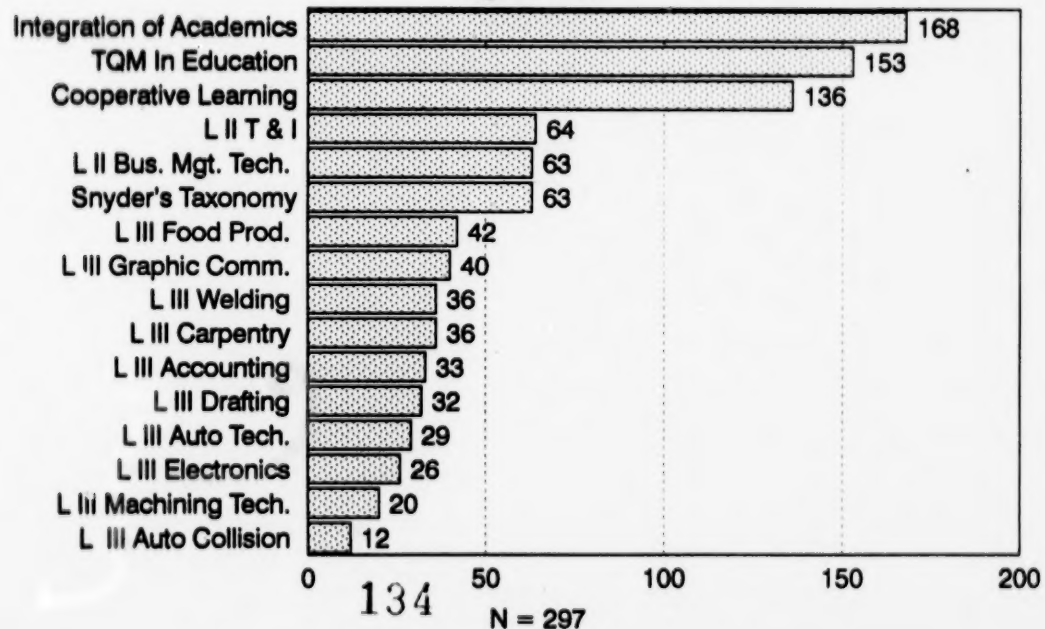
Assessment Of Professional Development Needs By Teachers Technology Related Workshops

August, 1993



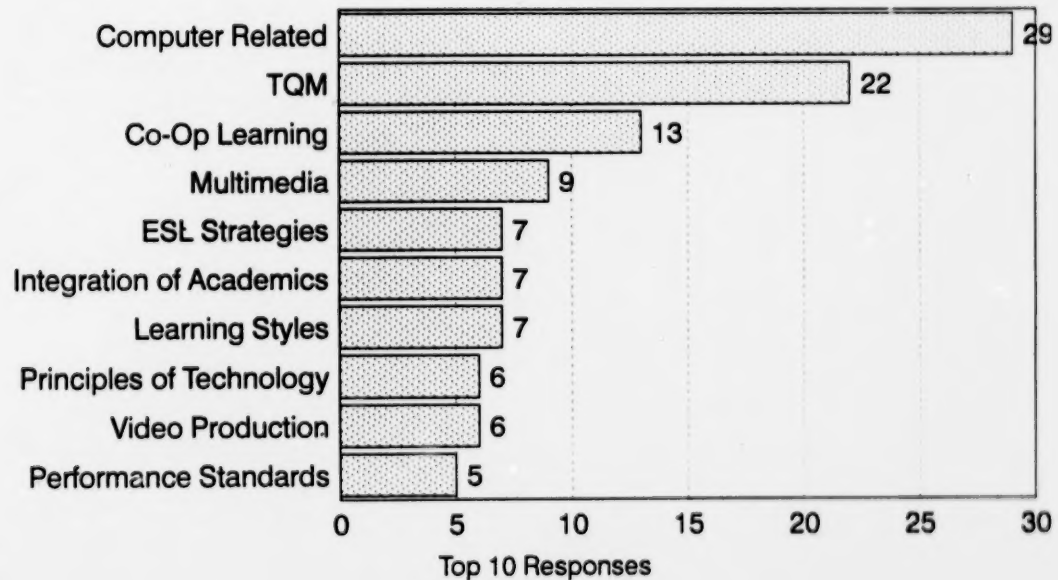
Assessment Of Professional Development Needs By Teachers Interested In Workshops On...

August, 1993



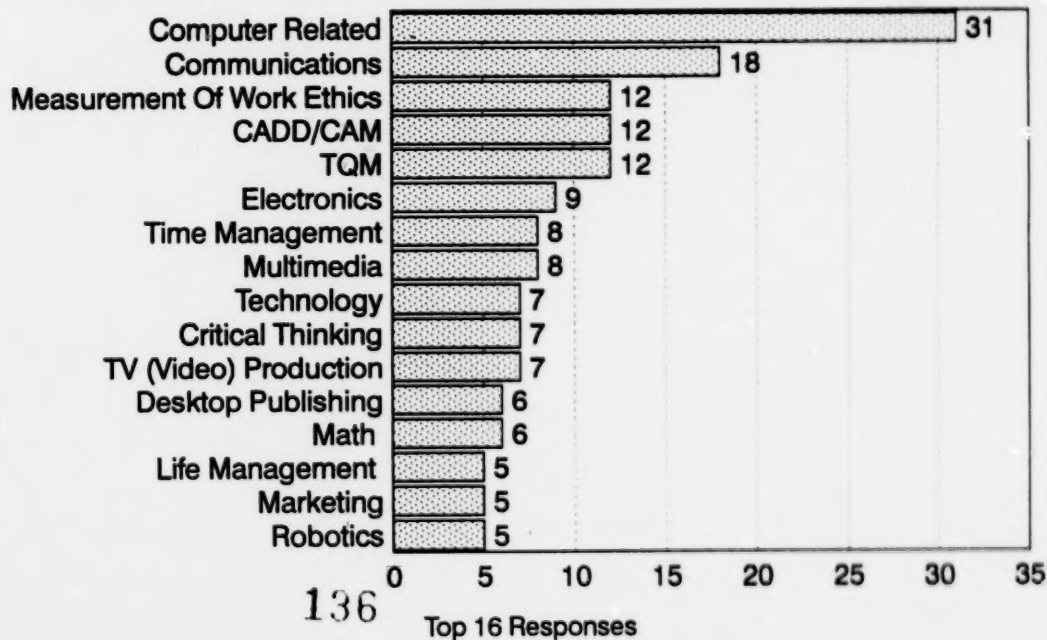
Assessment Of Professional Development Needs By Teachers Instructional Strategies Topics

August, 1993



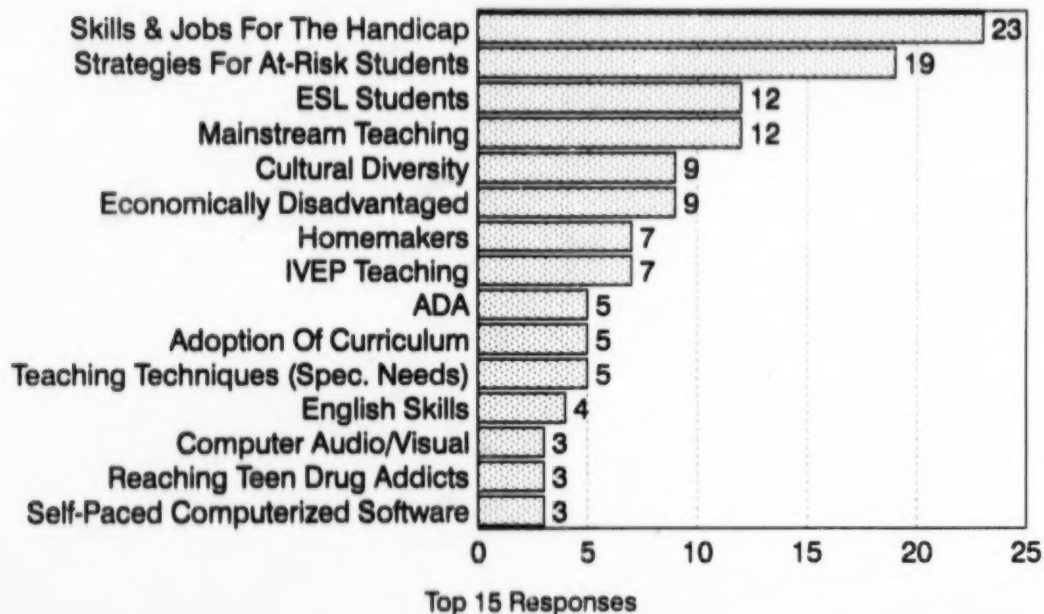
Assessment Of Professional Development Needs By Teachers Occupational Skills Needed In Program

August, 1993



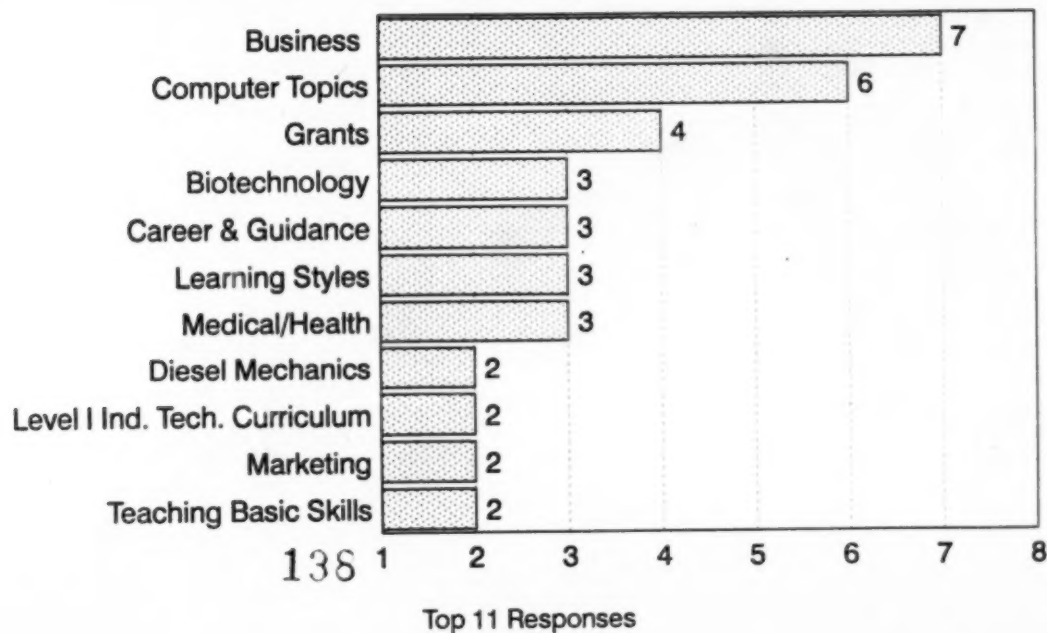
Assessment Of Professional Development Needs By Teachers Special Needs Populations Topics

August, 1993



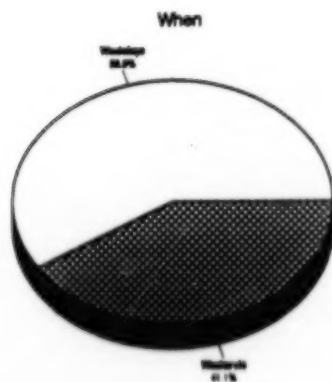
Assessment Of Professional Development Needs By Teachers "Other" Professional Development Topics

August, 1993



Assessment Of Professional Development Needs By Teachers Workshop Scheduling Preference

August, 1993



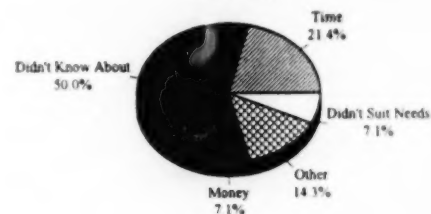
Local Director's Needs Assessment

August Conference, 1993

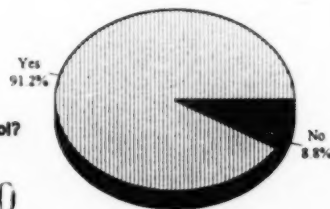
Did you or your teachers attend any workshops sponsored by ACVTE last year?



If not, why?



Would you be interested in having ACVTE sponsor a workshop at your district/school?

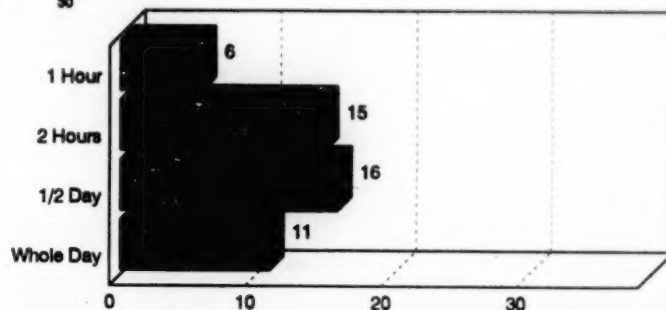
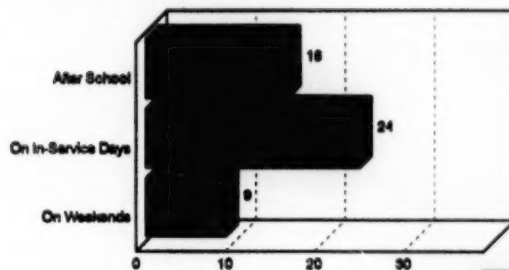


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Local Director's Needs Assessment

August Conference, 1993

Workshop Interest:

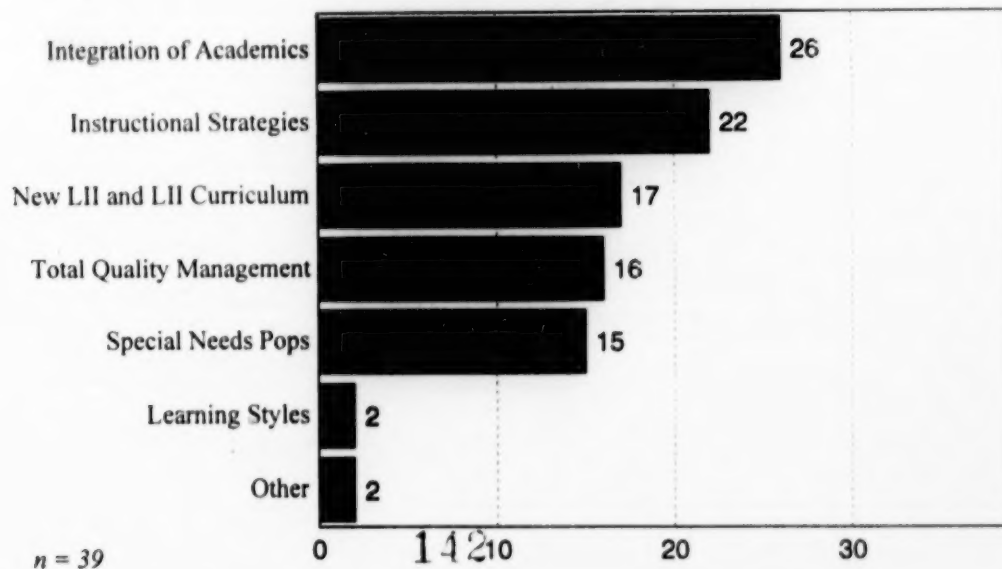


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Local Director's Needs Assessment

August Conference, 1993

Topics Interested In:



THE Northwest Regional Educational Laboratory

NORTHWEST REPORTApplied Academics**Washington Expands 'Tech Prep' Initiatives**

The state of Washington has emerged as a leader in the growing national movement to launch "tech prep" programs—cooperative agreements between high schools and community colleges that better prepare students for today's complex jobs. Now, new tech prep initiatives are being developed in Washington by The Boeing Company and the Washington State Board for Community and Technical Colleges. As a partner in both initiatives, NWREL will assist in developing and testing new approaches around the state.

The latest Boeing initiative is an expansion of a project begun in 1990, when the aerospace giant provided funds to the Seattle and Yakima community college districts for the development of applied academics and tech prep programs (see story on Page 6). In December, Boeing invited two more Washington community college districts, Edmonds and Everett, to design

tech prep programs with their local "feeder" high schools. The emphasis will be on creating totally new applied academics coursework at the community college level. NWREL's Education and Work Program is assisting Boeing in development and evaluation of these programs.

The focus of the Boeing project is on breaking down the barriers between subject areas and between institutions so that students leave with the ability to apply skills that match employers' expectations. Titled "Education That Works: Applied Learning for Tomorrow's Technologies," the project extends a commitment Boeing began in 1990 to strengthen K-12 applied academics programs. Thanks to Boeing grants over the past three years, more than 40 Washington high schools are now implementing applied math, communications, and physics coursework. There are an estimated 310 teachers now using ap-

See TECH PREP, Page 2

Candid Handbook Gives Communication Tips

Are you an alcohol (AOD) coordinator concerned about identifying parents who most need to hear substance abuse prevention messages? Are you trying to figure out exactly what the message to them should be? Are you concerned about what to do when a child overdoses at school and the news media come calling? And what about trying to make your superintendent and district look good when the school board asks for a presentation on the district's AOD and tobacco use problems?

A new, easy-to-read, hard-hitting handbook from NWREL's Western Regional Center for Drug-Free Schools and Communities is packed full of practical tips—and a little theory—for getting your



for AOD Coordinators.

"The handbook is unauthorized because we talk frankly about needs, problems, and frustrations that you face in communicating messages about the harmfulness of youths' AOD use," the authors say. "For example, we talk frankly about

message across to the people you need to reach. Although it's aimed specifically at AOD coordinators, the handbook contains information useful to any educator looking for better communication strategies.

"Chatty, informal, and perhaps even a trifle bit irreverent" is the way authors Joseph Schneider, Carol Thomas, and Diane Yoder of the Southwest Regional Laboratory describe the publication. An *Unauthorized Communication Handbook*

See HANDBOOK, Page 9

...Based Early Childhood Centers 5

Impact: Tech Prep Innovations in Yakima, Washington 6

Focus on the Education Profession: Assessment Training Package Takes Off 8

Summer Institute: Innovations in Early Literacy Education 9

TECH PREP: Applying Theoretical Skills in the Workplace is Critical

Continued from Page 1

plied coursework in Washington. (See the Northwest Report, February 1991, for a complete report on applied academics in the region.)

"We are encouraged by the kinds of innovation and cooperation already displayed at the local level," says Career Dayton, flowing corporate director of training and education relations. "Edmonds, Everett, Seattle, and Yakima are just four examples of how schools and community colleges in Washington are exploring better ways of preparing graduates for today's global economy." Dayton also is encouraging other business and industry organizations to get actively involved in tech prep activities through a newly formed National Tech Prep Network.

The Washington State Board of Community and Technical Colleges soon will award \$1.4 million in federal funds to a number of Washington secondary and postsecondary schools for planning and implementing tech prep programs. The funds were appropriated under the Carl D. Perkins Vocational and Applied Technology Education Act of 1990. Tech prep

projects in which funding will share

- *Example:* will be actively involved in program planning
- Applied academics will be an integral part of programs

Work-based learning will be a central component.

- Programs will be competency-based
- Programs will emphasize racial, ethnic, and gender equity
- Students will have individualized career plans

"Work-based learning will be a central program component—getting high school and community college students into the workplace to explore, see, and do," says Larry McClure, director of NWREL's Education and Work Program.

"Applying theoretical skills in the context of real employer settings is the ultimate test of blended academic/vocational programs," McClure added.

The Laboratory will work with the state board to assist the chosen sites by developing inservice training workshops and teleconferences, publishing a newsletter, maintaining a clearinghouse of resources on tech prep, evaluating programs, and providing technical assistance.

"It's opening up a lot of doors for students," says McClure.

Tech prep has its roots in "2 + 2"-type programs, in which curriculum articulation planning and agreements are under way between high schools and community colleges. Oregon has been a national leader in this process, with regional consortia in place across the state, says McClure. For example, in the Portland Community College service area in the 1990-91 school year, 439 high school students were awarded 3,065 credits worth \$82,863, thanks to these agreements.

For more information about tech prep in the Northwest, contact Larry McClure, NWREL Education and Work Program, (503) 275-9597 or (800) 547-6339, ext. 597.

Oregon Educator Coauthors How-to-Do-It Book on Tech Prep

Dale Parnell, a nationally known Oregon educator, has coauthored a highly acclaimed new how-to do it book on tech prep. Aimed at policymakers, educators, and employers, the book, *Tech Prep Associate Degree: A Win/Win Experience*, offers answers and practical down-to-earth advice from the visionaries, architects, and practitioners of tech prep/associate degree (TPAD) programs that work. Among the questions the book answers are: What is a TPAD program? How is it different from 2 + 2 and other forms of articulation?

How do you turn a good 2 + 2 program into a great TPAD program? How do you organize a TPAD consortium? Why is applied academics better for some students?

"The current high school dropout rate can be reduced if students see a focused and respected alternative learning opportunity that connects high school and college curricula with real-life issues," says Parnell, who currently heads the Office of Community College Services for the Oregon State Board of Education. Parnell, a former Oregon state superintendent of public instruction,

served as president and chief executive officer of the American Association of Community and Junior Colleges before taking his current position. Parnell's coauthor on the book, Dan Hull, is president of the Center for Occupational Research and Development.

To order the book, send \$12.50 plus \$2.50 for shipping to: Center for Occupational Research and Development, 601C Lake Air Drive, Waco, TX 76710, or call (800) 231-3015.



IMPACT EDUCATION AND WORK



Teacher Marc Hanna works with students during a technology lab at Eisenhower High School in Yakima, Washington.

A New Vision In Vocational Education

YAKIMA VALLEY COMMUNITY COLLEGE
HAS LINKED UP WITH AREA HIGH SCHOOLS
TO OFFER A "TECH PREP" ALTERNATIVE

By TONY KNEIDEK

Educators, industry representatives, and business activists are joining forces in this agricultural region to provide a workforce that meets the emerging needs of the modern workplace. It involves collaboration among industrial giants such as The Boeing Company, mid-sized regional employers, small entrepreneurial businesses, and educators throughout the Yakima Valley. And, says Gerald Perryman, an instructor at Yakima Valley Community College and chair of the Applied Academics Steering Committee, it involves fundamental changes in old approaches and public attitudes toward vocational education.

"Vocational education," Perryman says, "is not the dumping ground for the academically incapable. Technical education, which is what we're really talking about, requires people who have critical thinking skills and the ability to apply what they learn in the classroom to the world of work."

Enter "tech prep" programs, a collaborative approach that links high school and community college curricula. The Northwest Regional Educational Laboratory is evaluating the Boeing-sponsored project, which has resulted in grants to 42 Washington high schools and funded 10 teacher interns each summer since 1990-91.

The idea, notes Gary Dietzen, director of the Yakima Valley Skills Center, is to make education more meaningful and challenging for college-bound students as well as those students seeking technical jobs that do not require a four-year degree.

"The outcomes of a new vision of vocational/technical education will more than likely be the intentional integration of vocational and academic material," Dietzen wrote in "A Perspective on Vocational Education," a report to the Yakima School District. "This will prepare students for college and provide them with high-level job skills at the same time."

Yakima Valley Community College is in the second year of coordinating the development of tech prep programs that strengthen its links with the Skills Center and 25 high schools in the 8,000-square-mile district served by the community college. The partners, supported by \$75,000 in grants from The Boeing Company, have been developing applied academics curricula in communications, math, and science and begun a principles of technology (P-T) course in some area high schools.

At Eisenhower High School in Yakima, the principles of technology course is in its second trimester, says teacher Marc Hanna. Already, he notes, it has grown from 26 students in the fall to 48 this winter. The course's popularity, Hanna notes, can be traced to its hands-on approach and to the option for students to gain either science or vocational credit.

"The science program here is really strong," Hanna says. "But it has been mostly geared toward the kids going to college. This program has a different focus. We back off from the calculus-based math to more of a formula-based math."

Students usually spend three days a week in lab exercises testing theories in four major systems studied in P-T: mechanical, fluid, electrical, and thermal. Students range from those who learn best by doing to those who are strong on theory. "We get a real range here," Hanna says, noting that there are four physics students in his class of 22.

"I think the physics students enjoy the hands-on approach. Some students go through school and get a lot of science and math but don't know how to hold a screwdriver. Then there's a lot of students with math phobia. I really downplay the math and encourage students to experiment in the labs."

The Yakima Valley Skills Center, one of eight in Washington, provides technical education for a consortium of nine public school districts with 12 high schools.

Students attend classes for half a day at the center and the other half at their home high school. While at the center, they are enrolled in one of 14 programs, nine of which have coordinated curriculum with the community college.

The tech prep approach in Yakima works like this: A high school junior or senior from any of the nine school districts that form the skills center consortium can opt to attend a program at the center in which the curriculum has been coordinated with YVCC. For example, a student who completes the radio broadcasting program at the skills center and graduates from high school could also receive 30 credits at YVCC. Within a year, the student could earn an associate degree from YVCC and be on her way to work or a four-year college.

To avoid duplication, community college students may attend classes at the skills center, which also provides technical education for displaced workers or others seeking new careers and skills.

"We have different connections to our community than the other skills centers in the state," Dietzen says. "We are really a technology skills center. We stress higher-level thinking skills, analyzing problems, understanding systems, and discovering what technology is all about. There's an intellectual process that goes along with all we do."

In some respects, Dietzen notes, the Yakima Valley Skills Center is preparing students for a workplace that is largely non-existent, but emerging. The center uses cooperative learning methods, lessons in life skills, and team learning in a non-competitive environment.

"There's no top-down here," Dietzen says. "Everyone is empowered. We like to think of ourselves as a model for freedom of thought and freedom of expression."

The workplace that Dietzen envisions is increasingly calling upon employees to perform duties previously reserved for managers. Workers often must evaluate data, analyze information, solve problems, work in teams, communicate with customers, convert measurements, monitor production, and use other skills that require critical and analytical thinking.

"Our goal," Dietzen says, "is that when people leave [our programs] they be able to take care of themselves. It's that simple. That means that they will be able to find meaningful work and continue their education. It's not an either-or thing. To continue to grow, people need to continue to work and continue to learn."

Tech prep programs, says Bette Taylor, personnel director at Dowty Aircraft in Yakima, fit well with the workforce needs of her employer. "The backbone of our workforce is skilled people who need two years of additional training in technology, not necessarily a four-year degree," she says. "All those applied skills are perfect for us."

While applied science, math, and engineering skills are critical, Taylor says that communication skills are increasingly important. "We're learning to be a better company," says Taylor, who serves on the YVCC Applied Academics Steering Committee. "We're really flattening out our lines of authority, relying more on workers' viewpoints, and developing work groups. We're spending a lot of money on communication skills among our employees."

Tech prep programs and their applied academics approach strengthen the country as well as companies such as Dowty, which employs about 275 people. "These programs provide a strong academic and technical education for students," Taylor says. "It gives graduates the skills that this company and the country need to compete in the international marketplace."

"Help Wanted: Crisis in the Work Force" is a national project of The Public Agenda Foundation. In the Valley, Phoenix Newspapers Inc., KTVK-TV, Channel 3, and the Maricopa County community colleges are participating.

The project examines the need to improve education in light of growing global economic competition. *Gazette* education reporter Ray Schultze talked with teachers, students and businesspeople about how schools can better prepare people for the working world.

■ Monday — The gap between what is taught and what is needed to succeed at work.

■ Tuesday — Basic skills: The road to improvement.

■ Wednesday — Social problems that hinder education.

■ Today — Vocational programs: Their strengths and weaknesses.

■ Friday — Education reform: What changes are being discussed?

A readers' opinion survey compiled by the Public Agenda Foundation will be included in Sunday's Arizona Republic.



Fourth of five parts

Learning skills

Vocational training changes with times

By Ray Schultze
THE PHOENIX GAZETTE

Four years ago, the eighth-graders in Frank Bochanak's vocational class at Cave Creek's Desert Arroyo Middle School spent their time wielding saws and hammers and fashioning footstools.

If you visit one of his classes today, don't expect to see mounds of sawdust. You'll find computer terminals instead. Students explore electronics, aerodynamics, laser technology and robotics, and write about about what they discover.

The students aren't there to hone a woodworking hobby but to tread the path to technological literacy, using

See ■ VOCATIONAL, Page A2



Mark Henle / THE PHOENIX GAZETTE
With equipment like a \$9,000 electrocardiograph, the Vocational-Technical Center in the Deer Valley district allows students (from left) Tammy Rapp and Chris Johnson to get hands-on training from instructor Kay Marshall.

their minds and sharpening their verbal skills along the way. One final difference: The class isn't an elective. All middle school students must take it.

"Hopefully, we spark an interest," said Bochansky, who has been teaching for 13 years. "We may have a scientist come out of here, an engineer, maybe a creative writer."

This is the vocational education of the future, developed as business and industry urge schools to graduate students with a higher level of skills that are more relevant to the workplace.

Business executives and educators tout vocational education as a key way to improve America's economic productivity, and they lament that the public and its educational system are too wedded to traditional college preparatory classes.

An estimated 70 percent of the school student population pursues jobs straight out of high school or after a year or two of higher education without completing degree programs.

"We've got a system that seems to address academics more strongly than vocational things, yet only 10 percent of the kids are going to be graduating from college," said Malcolm Craig, president of the Valley's Garrett Engine Division of Allied-Signal Aerospace Co.

"It makes me wonder if we've got the emphasis in the right place."

Showing success

Advocates of vocational education concede that it remains handicapped with a reputation for being an academic dumping ground, the place for struggling misfits who don't know any better.

Few states provide as little support for vocational education as Arizona, which spends \$9 million annually; in contrast, Colorado invests \$65 million, New Mexico \$45 million.

Yet, vocational programs, which serve an estimated 25 percent of the state's juniors and seniors, on average show greater success in graduating students. The high school dropout rate for vocational students hovers around 12 percent, according to Barbara Border, a deputy superintendent with the Arizona Department of Education. The statewide high school dropout rate is roughly 37 percent.

Students who complete quality vocational programs can find the transition into the workplace easier, especially when they've been able to land temporary jobs while still in school through partnerships between vocational teachers and businesses.

Programs 'inadequate'

There are nationwide shortages in some trade and technical fields, such as skilled manufacturing and nursing. Allied-Signal, for instance, has to scour the nation for machinists.

One problem for students is finding a quality program — the old face of vocational education persists.

"There are not enough programs that are teaching to the technological age," Border said, adding that the equipment found in classrooms, when it's there at all, too often is outdated.

Just as great a problem, she said, is that some schools offer only a scattershot set of vocational classes, without stages a student can advance through from grade level to grade level, benefiting from continuing skill development.

"Right now I would say it (vocational education) is inadequate to what I find are the needs of business and industry, but it is getting better every day," Craig said.

He is among a group of 15 or 20 business leaders who have backed legislation in the past two years aimed at vocational education improvements.

The package has included \$2 million annually in new state money, which — combined with some federal funds — has been used for teacher-training, upgrading school equipment and supporting about 30 "model" programs statewide.

These models aim for a comprehensive, real-world approach and a thorough mixing of academic basics, including critical thinking, with vocational skills.

Among the models is the three-year health occupations program — for sophomores, juniors and seniors — at the Deer Valley Unified School District's Vocational-Technical Center in northwest Phoenix.

The first year provides students with instruction in anatomy and physiology, health and disease, nutrition, medical terminology, care provider-patient relationships, and exploration of all health-related careers.

The second year includes hands-on activity. Students have access to laboratories where they can hone nursing, dental and medical skills, using themselves and mannequins as patients and manipulating equipment such as a \$9,000 electrocardiograph. The emphasis is on problem-solving and teamwork.

The students also venture into the field, volunteering their help or acting as observers in laboratories, pharmacies, doctors' and dentists' offices, and hospitals.

About one-fourth of those students who complete two years take "co-op" in their senior year, attending a class on employability skills and spending about 15 hours or more a week on a training plan at a paid health-related job.

"Most of the students, by the time they're out of here, know exactly where they're going," program coordinator Kay Marshall said, adding that about 90 percent of the graduates enroll in college, often working at the same time to pay their way.

"I could turn you on to student after student who said this program has given them such a leg up in life it's unbelievable."

The U.S. Department of Education was impressed enough in March to declare the program the national runner-up in the Outstanding Vocational-Technical Education Programs competition.

Hard to stay current

Educators argue that schools wait too long to expose students to technology and vocational education. Starting in seventh grade, like Bochansky's technology class at Arroyo Middle School, is ideal, they say.

It can be difficult for vocational programs to stay current unless they maintain close ties with business and industry, which continually try to adapt to new market conditions.

In their latest review with industry, Peoria High School agricultural education instructors John Mulcahy and Mike Gillispie concluded that biotechnology — the genetic manipulation of crops — is the wave of the future.

So with the help of a \$52,000 state grant, they're having a biotechnology laboratory built on campus later this fall.

"We're really in the second 'green revolution' in agriculture right now," Mulcahy said. "The kids have got to be in on that."

Centers cut expenses

The expense of buying state-of-the-art equipment and offering specialized courses has been a stumbling block to quality vocational education, so some of the larger, urban districts in the state have created vocational centers, drawing students — typically for a half-day — from the district's high schools.

East Valley schools have taken that concept one step farther with the creation in July of a joint vocational magnet that serves more than 1,100 students from

Mesa, Tempe, Chandler and seven other districts.

With a \$5 billion property tax base, the East Valley Institute of Technology has become the richest district in the state, and needs that base, Superintendent Keith Crandell said, to offer classes in 15 major fields, from aerospace and automotive to the maintenance and metal trades.

Four years ago, he said, it cost the Mesa Unified School District \$250,000 to equip its machinery class.

"How many districts can come up with \$250,000?" Crandell asked.

Then there's the need to replace obsolete equipment. The Mesa district spent \$400,000 on a computer system about eight years ago, and "it's good for a boat anchor now, that's about all."

High school students aren't the only ones who use the facilities, which are housed in the Mesa district's former vocational center. Rio Salado Community College students attend classes in the evening, primarily in welding, upholstery, electronics, air conditioning, automotive and radio broadcasting.

"We have to be able to become a community training center," Crandell said.

College programs

The Maricopa County community college system, with a full-time equivalent enrollment of more than 90,000, has become the state's major vocational technical program provider.

Of those students who have declared their intent to complete a formal course of study, about 40 percent are enrolled in occupational programs.

Last year, the system awarded 2,501 occupational certificates of completion and 1,198 associate of applied science degrees.

Many of the students are older adults in the work force who are looking to improve their skills or learn another field, said John Bradley, the college system's occupational program specialist.

The colleges also have training contracts with some of the state's major employers, and have joined state officials in trying to lure business and industry to Arizona, offering help in recruiting and training work forces for newly arriving companies.



Mark Henle / THE PHOENIX GAZETTE
As part of the Deer Valley district's health occupations program, students Melody Wacker and Jeff Fantin learn cardiopulmonary resuscitation.

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